AMATEUR RADIO CATALOG

WINTER '95-'96

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AMATEUR ELECTRONIC SUPPLY® INC.

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IC-2350H FAST SCAN!

sensitivity range, enabling crystal clear reception of desired signals while fighting IMD (intermodulation distortion) from pagers, land mobile equipment, and other forms of interference. **A COMBINATION OF GREAT FEATURES AT A VERY AFFORDABLE PRICE!** Listen in on all the action using the IC-2350H and discover what a great value this next generation radio is! Visit your ICOM dealer today and hear more of what you've been missing!

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IC-2350H FEATURES:

- 2M (45 Watts) & 440 MHz (35 Watts)
- Wide Band Rx (118-174 MHz)
- 110 Channel Memory Backed Up with EEPROM
- Tone Scan (opt. UT-89)
- Remote Control Mic (opt. UT-101)
- PL Encode Built-in
- Built-in Duplexer
- Auto Repeater Shift
- Voice Synthesizer (opt. UT-66)

Call ICOM's brochure hotline: (206) 450-6088. Or contact ICOM Technical Support in the HamNet forum on CompuServe @75540,525 (Internet: 75540.525 @ compuserve.com.) *Scan methods that are approximately twice as fast: programmed, full memory and memory skip. © 1995 ICOM America, Inc., 2380-116th Ave. N.E., Bellevue, WA 98004. The ICOM logo is a registered trademark of ICOM, Inc. All stated specifications are subject to change without notice or obligation. All ICOM radios significantly exceed FCC regulations limiting spurious emissions. CompuServe is a registered trademark of CompuServe, Incorporated, an H&R Block Company. 23501095Y

ICOM

ICOM
THE NEXT GENERATION

AES® Amateur Radio Equipment Price List

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All prices and specifications are subject to change without notice. Due to foreign currency fluctuations, promotions, manufacturer's coupons, etc. prices may vary. Please confirm prices before ordering. AES® is not responsible for typographical errors or omissions.

CODES SHOWN NEXT TO PRICES

(T) • Item too large for UPS. Truck shipment only. No COD, send payment in advance or use charge card for merchandise; freight charges will be collected upon delivery.

NOTE: Charges for truck shipments from 1-99 lbs are running a minimum of $80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.

(D) • **DISCONTINUED** by Manufacturer but still available from stock in limited quantities when this price list was published.

(†) • **TEMPORARY LOW PRICE** due to Special Purchase, overstock, etc. Quantities may be limited at price shown.

(Δ) • Item *not* discontinued by Manufacturer but probably will not be available from our stores when present stock sold out.

End of line STORE LOCATION CODES (means Close-out or Special items were at these stores): (m) Milwaukee; **(w)** Wickliffe; **(f)** Orlando; **(c)** Clearwater; **(v)** Las Vegas; **(*)** all AES stores

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Low-Cost Shipping & AES® Credit Card information... p.154

Info also available on the **AES® BBS**
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ADI (ADI)

	Reg	Sale
AT-200 2.5w 2m FM HT/batt/cgr/TTP	$220.00	CALL
AT-200HP 5w 2m FM HT/batt/cgr/TTP	230.00	CALL
AT-400 2.5w 440 FM HT/batt/cgr/TTP	235.00	CALL
AT-400HP 5w 440 FM HT/batt/cgr/TTP	247.00	CALL
ARC-12 Smart charger	89.95	
CHA-072 Wall charger for 7.2v battery	12.95	
CHA-120 Wall charger for 12v battery	12.95	
CMP-145 Compact lapel spkr/mic	29.95	
CPB-262 Batt holder for 6 AA nicads	19.95	
PCA-145 Cig lighter adapter cable	14.95	
RBP-072 7.2v 700ma battery	49.95	
RBP-120 12v 600ma battery	69.95	

ADI - continued

	Reg	Sale
SLC-200 Carrying case	18.95	
AR-146 50w 2m FM Xcvr w/TTP mic	320.00	CALL
AR-446 35w 440 FM Xcvr w/TTP mic	346.00	CALL

AEA (AEA)

DC-1 Cigarette lighter cord Δmw	$ 7.00	5.95
KK-1 Keyboard keyer for IBM PC	199.00	189.95
KKCOM Optional utility program	49.00	

DATA CONTROLLERS

PK-12 1200 bps VHF/UHF packet controller	$129.00	119.95
100K/PK-12 100K MailDrop upgrade; PK-12	50.00	
AC-1 12vdc 600 ma adaptor	21.00	
APRS Adapter cable for GPS Rcvr to TNC	30.00	
PK-96 9600 baud packet controller/32K RAM	229.00	199.95
100K 100K memory upgrade for PK-96	50.00	
PK-96/100K 9600 baud controller/128K RAM	279.00	249.95
PC-Pakratt-88 IBM prog; PK12/88/96 ..Dmwv	49.00	39.95
PC Pakratt Lite Packet only terminal prog	49.00	
PK-232MBX Controller/int VHF/HF modem/FAX	399.00	CALL
PK-900 Multi-mode digital controller w/FAX	569.00	469.95
DSP-1232 Single port multi-mode controller	789.00	699.95
DSP-2232 Switchable ch multi-mode controller	999.00	899.95
9600 bps modem card option for PK-900	75.00	
AC-4 12vdc 1A power supply	32.00	
AEA-FAX III-900 PK-900/IBM FAX software	75.00	
COM Pakratt w/FAX C64 prog; PK88/232 ..Δfv	79.00	74.95
MacRATT w/FAX Mac prog; PK88/232 ....Dwv	69.00	64.95
MacRATT 3.0 w/FAX Mac prog; PK88/232	TBA	
PC-Pakratt II w/FAX IBM prog; 12/88/232	69.00	64.95
PC-Pakratt for Windows 2.0 IBM; 12/88/232	129.00	119.95
Log Windows 2.0 Program for IBM	99.00	89.95
Extra PK-232 to radio open ended **cable**	9.00	
IH CABLE PK-232 - Icom/Yaesu/Alinco HT	25.00	
IM CABLE PK-232 - Icom 8-pin mic cable	25.00	
IW CABLE PK-232 - Icom IC-W2A cable	25.00	
KA CABLE PK-232 - Kenwood 13-pin cable	30.00	
KH CABLE PK-232 - Kenwood HT cable	25.00	
KM CABLE PK-232 - Kenwood/Ali 8-pin mic	25.00	
YM CABLE PK-232 - Yaesu 8-pin mic cable	25.00	
RS-232 Y cable Δm	39.00	
Technical manual; PK-232	25.00	
WeFax-256 WX FAX prog; DSP-1232/2232	129.00	119.95
AEA-FAX III Facsimile & wire photo program	149.00	99.95
PCB-88 IBM compatible plug-in packet adapter	179.00	159.95

ANTENNAS

IsoLoop 10-30 150w 10-30MHz 43" loop/50'cable	$389.00	329.95
50' shielded **loop cable**, **new** style	29.00	
100' shielded **loop cable** w/connectors	39.00	
IT-1 IsoTuner Automatic tuner for IsoLoop	279.00	239.95
IsoPole 144 2m base station antenna	59.00	
IsoPole 220 220MHz base station antenna	59.00	
IsoPole 440 440MHz base station antenna	89.00	
HR-1 2m ½ wave telescopic whip w/BNC	24.00	
HR-2 220MHz ½ wave telescopic whip w/BNC	24.00	

AEA - continued

	Reg	Sale
SWR-121 HF Antenna performance analyzer	399.00	349.95
SWR-121V/U VHF/UHF ant performance analy	469.00	399.95
AA.COM SWR curve IBM soft; 121/121V/U	75.00	69.95
Carrying Case For SWR-121/121V/U	29.00	

MISCELLANEOUS

ARE-60/HL-60 HamLink Phone controller	$269.00	239.95
ARE-61/HL-61 Interface cable for Icom	50.00	
ARE-62/HL-62 Interface cable for Kenwood	50.00	
ARE-63/HL-63 Interface cable for Yaesu	60.00	
OP-80 OpLink For fast CW/stereo headset	130.00	109.95
RL-60 Radio Link HF remote via handheld	329.00	289.95
ST-1 Satellite tracking hardware/software	399.00	369.95
AVT Master Amiga Video Sys; SSTV/FAX Δmwfv	319.00	169.95
DM-1 2m/220/440 FM deviation meter	169.00	159.95
World Clock	25.00	

AES (AES)

Pentium 90 90MHz Intel/1.2Gig/8M/.28SVGA		CALL
Quad Speed CD-ROM drive		189.95

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ARRL (ARR)

100 1996 Radio Amateur's Handbook/software	$ 38.00	
110 200 Meters and Down (early ham radio)	8.00	
115 AX.25 (packet radio)	8.00	
120 Advanced Class License Manual	12.00	
126 Antenna Book w/IBM software	30.00	
130 Antenna Compendium	10.00	
135 Antenna Compendium II	12.00	
138 Antenna Compendium IV w/software	20.00	
140 Antenna Impedance Matching	20.00	
145 Complete DX'er	12.00	
150 Data Book	15.00	
155 Extra Class License Manual	8.00	
160 FCC Rule Book	12.00	
165 First Steps in Radio	6.00	
170 General Class License Manual	12.00	
180 Grid Locator Atlas	5.00	
185 Hints and Kinks	10.00	
190 Hostage in the Woods	6.00	
195 Introduction to Morse Code cassettes	10.00	
198 Introduction to Radio Frequency Design	30.00	
200 Log Book	3.50	
205 Low Profile Amateur Radio	8.00	
210 Morse Code the Essential Language	6.00	
215 Morse Tutor software for IBM	20.00	
220 Night Signals	5.95	
230 Novice Notes: The Book	6.00	
236 Now You're Talking II (new ham)	19.00	
240 Operating Manual	22.00	
250 1995 Passport to Worldband Radio Dmwv	19.95	14.95
251 1996 Passport to Worldband Radio	19.95	
252 Packet: Speed, More Speed & Applications	15.00	

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260	RFI-How to Find It & Fix It	15.00	
265	Radiogram message blanks .....pad	2.00	
270	Repeater Directory	7.00	
272	Repeater Directory software	14.95	
275	Satellite Anthology	10.00	
280	Satellite Experimenter's Handbook	20.00	
285	Set 1 5-10 wpm code practice cassettes	10.00	
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375	Grand Canyon QSO	5.00	
380	Murder by QRM	5.00	
385	SOS at Midnight	5.00	

RSGB PUBLICATIONS

405	Radio Communications Handbook	$ 35.00	
410	VHF/UHF Manual	30.00	

AIM (AIM)

24-7474P	Precision knife set .....Δw	$ 27.00	9.95
24-7735P	Coax stripper; RG-58/59/62	38.25	19.95
24-7736P	Coax stripper; RG-59/6/8281	38.25	19.95
24-7739P	Coax stripper; RG-8/11/213	62.85	29.95
24-9912P	Crimp tool for RG-174 .....Δm	71.25	14.95
37-208	6-socket wall surge protector .....Dm	32.85	8.95
37-503	6-socket surge/EMI/RFI filter	41.85	29.95
38-305	500ma 3/4.5/6/7.5/9/12vdc adapter	14.85	12.95
38-312	1.2A 1.5/3/4.5/6/7.5/9/12vdc adapt	43.50	24.95
38-384	4A power supply, 5A surge	88.50	39.95
64-3UUP	3' RG-58 w/PL-259s	6.75	
64-6UUP	6' RG-58 w/PL-259s	7.95	
64-9UUP	9' RG-58 w/PL-259s	8.85	
64-12UUP	12' RG-58 w/PL-259s	10.50	
64-18UUP	18' RG-58 w/PL-259s	11.70	

ALINCO (ALI)

ACCESSORIES FOR DISCONTINUED HT'S

EBP-10N	7.2v 700ma battery .....Δmwfv	$ 29.95	
EBP-12NA	12v 700ma quick charge batt Δm	62.00	
EDC-2	Cig charging cord; EBP-7NAZ .....Δm	9.00	
EDC-8Z	Mobile DC pwr cable w/filter .....Δm	20.00	15.95
EDC-16	Cigarette lighter cable .....Δmfv	12.00	
EDC-21	Extra wall cgr for EBP-10NA .....Δmf	18.00	
EDC-22	Wall charger for EBP-12NA .....Δmv	22.00	
EDC-26	DC cord/cgr w/filter; EBP-10NA ..Δmfv	17.00	
EDH-1	Dry cell battery case .....Δmfv	19.00	
EJ-6U	Tone squelch unit .....Δm	48.00	39.95
ESC-10	Case; DJ-162T w/EBP-10NA .....Δmf	23.00	
ESC-11	Case; DJ-560T/A, EBP-10NA .....Dm	23.00	
DJ-F1T	2w 2m FM HT/batt/cgr/TTP .....Dmwv	349.00	248.95
	$60 coupon - DJ-F1T thru 12/31/95		

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ALINCO - continued

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DJ-F1T/HP	5w 2m FM HT/batt/cgr/TTP ....Dmf	379.00	268.95
	$60 coupon - DJ-F1T/HP thru 12/31/95		
DJ-180T	2w 2m FM HT/batt/cgr/TTP	289.00	CALL
	$35 coupon - DJ-180T thru 12/31/95		
DJ-180TH	5w 2m FM HT/batt/cgr/TTP	309.00	CALL
	$35 coupon - DJ-180TH thru 12/31/95		
DJ-480T	440 FM HT/batt/cgr/TTP	359.00	CALL
DJ-580T	2.5w 2m/440 HT/batt/cgr/TTP Dmwfv	489.00	388.95
	$15 coupon - DJ-580T until gone!		
DJ-582T	2.5w 2m/440 FM HT/batt/cgr/TTP	499.00	CALL
	$45 coupon - DJ-582T thru 12/31/95		
DJ-582TH	5w 2m/440 FM HT/batt/cgr/TTP	519.00	CALL
	$45 coupon - DJ-582TH thru 12/31/95		
EBC-3	Belt clip	5.00	
EBC-5	Shoulder belt w/soft case .....Δmwfv	54.00	24.95
EBC-6	Mobile bracket for DJ-180T	22.00	
EBP-14N	7.2v 400ma thin nicad; DJ-F1T Δmf	62.00	44.95
EBP-16N	7.2v 700ma nicad batt; DJ-F1T	47.00	
EBP-18N	12v 600ma nicad batt; DJ-F1T	76.00	
EBP-20N/EBP-26N	Extra 7.2v 700ma; 180/580	52.00	
EBP-22N/EBP-28N	12v 600ma batt; 180/580	80.00	
EBP-24N	7.2v 1200ma batt; 180/580/582T	79.00	
EDC-24	Wall cgr; 14/16/18/20/22/24N	24.00	
EDC-34	Quick charger	103.00	
EDC-36	Mobile DC power cable w/filter	22.00	
EDC-37	13.8v power cable	9.00	
EDC-43	Cig lighter cable	10.00	
EDC-49	Battery charger; EBP-20/22/24N	24.00	
EDH-5	AA dry cell pack	19.00	
EDH-11	AA alk pack; DJ-180/580/582T	21.00	
EDH-12	DC jack adapter; DJ-180T	12.00	
EJ-12U	Tone decode unit; DJ-F1T	51.00	
EJ-14U	50 ch memory unit; DJ-180T	23.00	
EJ-15U	200 ch memory unit; DJ-180T	34.00	
EME-4	Ear/microphone w/PTT	34.00	
EME-6	Earphone	14.00	
EME-10	Headset w/VOX/PTT	71.00	
EME-11	Ear/microphone w/PTT/VOX	52.00	
EMS-2Z	Speaker/mic	44.00	
EMS-8Z	Remote speaker/mic	48.00	
ESC-15	Soft case for DJ-F1T	20.00	
ESC-17	Soft case; 580/582T w/EBP-20N	22.00	
ESC-18	Soft case; DJ-180T w/EBP-20N	22.00	
ESC-19	Soft case; DJ-180T w/EBP-22N	24.00	
ESC-26	Soft case; 580/582T w/EBP-22/24N	24.00	
DJ-G1T	2m FM HT/batt/cgr/TTP/ch scope	369.00	CALL
	$45 coupon - DJ-G1T thru 12/31/95		
EBC-6	Mobile bracket	22.00	
EBP-30N	7.2v 700ma nicad battery	62.00	
EBP-31N	7.2v 1200ma nicad battery	79.00	
EBP-32N	12v 722ma nicad battery	95.00	
EDC-36	Mobile DC power cable w/filter	22.00	
EDC-37	13.8v power cable	9.00	
EDC-52	Quick charger	119.00	
EDC-55	Wall cgr; EBP-30/31/32N	24.00	
EDH-14	Dry cell battery case	21.00	
EJ-16U	Tone squelch unit	60.00	
EME-12	Headset w/earphone/mic/VOX	71.00	
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EMS-8Z	Remote speaker/mic	48.00	
EMS-9	Speaker/mic	44.00	
ESC-23	Soft case for EBP-30N	22.00	
ESC-24	Soft case for EBP-31N/32N	23.00	
DJ-191T	2m FM HT/batt/cgr/TTP	309.00	CALL
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DJ-191TH	5w 2m FM HT/batt/cgr/TTP	359.00	CALL
	$50 coupon - DJ-191TH thru 12/31/95		
DJ-G5T	2m/440 FM HT/EBP-33N/cgr/TTP	599.00	CALL
	$15 coupon - DJ-G5T thru 12/31/95		
DJ-G5TH	2m/440 FM HT/EBP-36N/cgr/TTP	614.95	CALL
	$80 coupon - DJ-G5TH thru 12/31/95		
DJ-G5TY	2m/440 FM HT/EBP-37N/cgr/TTP	576.95	CALL
	$50 coupon - DJ-G5TY thru 12/31/95		
EBC-6	Mobile bracket	22.00	
EBP-33N	4.8v 650ma nicad battery	63.00	
EBP-34N	4.8v 1200ma nicad battery	84.00	
EBP-35N	7.2v 900ma nicad battery	97.00	

ALINCO - continued

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EBP-36N	9.6v 650ma nicad battery	94.00	
EBP-37N	4.8v 700ma nicad battery	38.00	
EDC-36	Mobile DC power cable w/filter	22.00	
EDC-60	Quick charger	99.00	
EDH-16	Dry cell battery case	14.00	
EME-6	Earphone	14.00	
EME-12	Headset w/earphone/mic/VOX	71.00	
EME-13	Headset w/ear bud/mic/VOX	71.00	
EMS-8Z	Remote speaker/mic	48.00	
EMS-9	Speaker/mic	44.00	
ESC-28	Soft case for EBP-33N	22.00	
ESC-29	Soft case for EBP-37N	22.00	
ESC-30	Soft case for EBP-34N/35N/36N	22.00	
DR-M06T	10w 6m FM Xcvr w/TTP mic	479.00	CALL
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EJ-19U	Memory expansion unit	35.00	
EJ-20U	Tone squelch unit	46.00	
DR-130T	50w 2m FM Xcvr w/TTP mic	419.00	CALL
	$40 coupon - DR-130T thru 12/31/95		
DR-150T	50w 2m FM Xcvr w/TTP mic/9600	479.00	CALL
	$55 coupon - DR-150T thru 12/31/95		
CC-150	Cloning cable for DR-150T	15.00	
DR-430T	440 FM Xcvr w/TTP mic	499.00	CALL
EJ-19U	Memory expansion unit	35.00	
EJ-20U	Tone squelch unit	46.00	
EJ-8U	DTMF squelch; DR-590/592/599 ..Δmv	47.00	
DR-600TB	45/35w 2m/440 FM Xcvr/TTP mic	749.00	CALL
	$55 coupon - DR-600TB thru 12/31/95		
EDC-19	9.75' separation mounting kit	40.00	
EDC-20	16' separation mounting kit	46.00	
EJ-7U	Tone squelch unit	69.00	
DR-610T	50/35w 2m/440 FM Xcvr/TTP mic	819.00	CALL
	$60 coupon - DR-610T thru 12/31/95		
EBC-8	Front control head bracket	16.00	
EDS-1	Junction box w/ext spkr, mic jacks	59.00	
EDS-2	3 meter extension cable for EDS-1	24.00	
EDS-3	5 meter extension cable for EDS-1	39.00	
EJ-23U	Additional memory unit	36.00	
EJ-24U	Tone decoder unit	85.00	
DR-1200T	25w 2m FM data radio.....Dmwfv	349.00	199.95
EHM-36A/EMS-10	TTP mic; DR-1200T only	56.00	
DR-1200TH2	25w 2m FM 9600 baud only Dmwfv	389.00	259.95
DX-70T	Compact HF Xcvr w/6m	1261.00	CALL
	$110 coupon - DX-70T thru 12/31/95		
	FREE EDS-4 from Alinco - DX-70T thru 12/31/95		
EBC-8	Front control head bracket	16.00	
EBC-9	Mobile bracket	49.00	
EDS-4	Rem mt acc kit w/5' cable, 2 covers	44.00	
EDS-5	Microphone extension cable	36.00	
EDX-1	Manual antenna tuner	299.00	269.95
EMS-14	Desk top microphone	108.95	

ALPHA DELTA (ALP)

R-T	200w 500 MHz lightning protector	$ 32.95	
	Extra **arc-plug** cartridge for **R-T**	12.95	
R-T/N	200w thru 1 GHz type N protector	39.95	
	Extra **arc-plug** cartridge for **R-T/N**	12.95	
HV	2kw 500 MHz lightning protector	35.95	
	Extra **arc-plug** cartridge for **HV**	15.95	
HV/N	2kw thru 1 GHz type N protector	42.95	
	Extra **arc-plug** cartridge for **HV/N**	15.95	
LT	200w thru 10m 'T' SO-239 protector	22.95	
	Extra **arc-plug** cartridge for **LT** or LT/N	17.95	
Delta-2	500 MHz 2-pos coax switch/protector	49.95	
Delta-2/N	1.3 GHz 2-pos type N switch/protector	64.95	
Delta-4	500 MHz 4-pos coax switch/protector	79.95	
Delta-4/N	1.3 GHz 4-pos type N switch/protector	89.95	
D-4	Extra arc-plug; Delta-2/2N/4/4N	9.00	
DX-80	80m 134' complete dipole antenna	49.95	
DX-40	40m 67' complete dipole antenna	39.95	
DX-20	20m 34' complete dipole antenna	39.95	
DX-A	160-80-40m twin sloper antenna	59.95	
DX-B	160-80-40-30m 60' sloper ant	69.95	
DX-CC	80-10m 5-band 82' no trap, no tuner dipole	119.95	
DX-DD	80-40m 82' Delta Dipole antenna	89.95	
DX-EE	40-10m 4-band 40' no trap, no tuner dipole	99.95	
DX-SWL	AM broadcast-13m 60' SWL sloper ant	79.95	
DX-SWL-S	90-13m 40' SWL sloper ant Δmwfv	59.95	24.95

ALPHA DELTA - continued

	Reg	Sale
DX-Ultra AM broadcast-30MHz 80' SWL dipole	119.95	
Delta-C Kit w/ctr ins/2 end ins/static protect	29.95	
SEP Extra arc-plug cart; DX-Ultra/Delta-C	15.95	
Delta-CIN Antenna end insulator ....each	1.00	

ALPHA NEONX (ALN)

Call Sign Neon sign; specify call, spec order*	$199.95	
Call w/On Air Neon sign; specify; spec order*	249.95	

*Neon signs are custom made and drop-shipped from the factory and are not returnable.

AMECO PUBLICATIONS (AME)

4-01 Code Course Instruction Booklet	$ 1.50	
6-01 Mastering the Morse Code	2.50	
12-01 General Class FCC Test Manual	9.95	
17-01 Extra Class FCC Test Manual	5.95	
23-01 Novice Theory Course	6.95	
26-01 Advanced Class FCC Test Manual	9.95	
27-01 Novice Class FCC Test Manual	5.95	
28-01 Technician Class FCC Test Manual	5.95	
78-01 Codeless Technician FCC Test Manual	9.95	
102-01 Amateur Radio Theory Course	7.95	
EN-1 Novice Class Exam	1.95	

CODE COURSES - CASSETTE TAPES

100-T Junior code tape, 0-7½ wpm	$ 5.95	
101-T Senior code tapes, 0-18 wpm	10.95	
103-T Advanced code tape, 8-18 wpm	5.95	
104-T Extra Class code tape, 20 wpm	5.95	
105-QT General Class QSO code course tape	5.95	
106-QT Extra Class QSO code course tape	5.95	
107-PC-2 IBM Morse Code Course, version 2.0	29.95	
NP-1 Novice Code & Theory Course	10.95	

CODE PRACTICE OSCILLATORS & CODE KEYS

OCM-2K Code oscillator & CW monitor kit	$ 19.95	
OCM-2W Wired oscillator & CW monitor	24.95	
K-1 Bakelite type key	9.95	
K-4 Brass type key	14.95	

PREAMPLIFIERS

TPA Tunable preamp & indoor active ant	$ 76.95	69.95
P-9T Power supply for TPA	9.50	
PT-3 2-54 MHz transceiver preamp	124.95	119.95
P-12T Power supply for PT-3	9.95	

FILTERS

HP-75T 75 ohm high-pass filter	$ 12.95	
HP-300T 300 ohm high-pass filter	12.95	

AMERITRON (AMR)

AL-80B 1kw PEP out linear (3-500Z)	1195.00	1069
AL-82 1.5kw PEP out linear (2 3-500Zs)	2095.00	1769
AL-800 1250w PEP out linear (3CX800A7)	1595.00	1429
AL-800H 1.5kw PEP out linear (2 3CX800A7)	2295.00	2059
AL-811 600w PEP out linear (3 811As)	649.00	589.95
AL-811H 800w PEP out linear (4 811As)	795.00	719.95
AL-1200 1.5kw PEP out linear (3CX-1200A7)	2195.00	1849
AL-1500 Linear amplifier (8877)	2695.00	2269
ALS-500M 600w PEP out solid state mob amp	799.00	679.95
ALS-600 700w PEP out solid state amp w/ps	1299.00	1099
ATR-15 1.5kw antenna tuner	399.00	349.95
ICP-120 120v inrush protector	79.00	
ICP-240 240v inrush protector	79.00	
QSK-5 Stand alone T/R switch	349.00	299.95
QSK-5PC PC board kit; T/R switch	249.00	209.95
CF-5 Cooling fan for QSK-5	39.95	
RCS-4 4-pos wireless remote coax switch	139.00	129.95
RCS-8V 160-2m 5-pos remote coax switch	149.00	139.95

Note: RCS-8V requires 8-wire control cable.

ANLI (ANL)

A-200 2m/440 4.5/7.2db 6' base antenna	$ 99.95	89.95
A-300 2m/440 6.8/9.3db 11.5' base ant	149.95	129.95
A-1000 2m/440 8.5/11.8db 17.5' base ant	199.95	169.95
AL-800 2m/440 BNC rubber duck antenna	39.90	
RD-8 2m/440 6.5" BNC whip	19.95	
RD-78 2m/440 15" BNC whip	26.90	
S-1 2m/440 2.15/3.2db 14" whip	27.90	
CM-1 Clip mt w/angle adjust BNC, coax	19.95	
CM-2 Clip mt w/BNC, coax	17.95	
WA-1 Window/sun roof clip mt/BNC, coax	23.95	

ANLI - continued

	Reg	Sale
AT-2 2m/440 3/5db NMO mt mobile ant	49.95	
AT-2/Plus 2m/440 4.1/6db NMO mt mob	59.95	
AT-2A/Plus 2m/220 4.1/4.8 NMO mt mob	59.95	
AT-2/Plus Tri 2m/220/440 4.1/4.8/6db NMO	69.95	
AT-3 2m/440 2.15/3db 19" UHF mt mob	29.95	
AT-4 2m/440 3/5.5db 38" NMO mt mobile ant	49.95	
AT-4/NMO 2m/440 3/5.5db 38" NMO mt .....Df	49.95	39.95
AT-4/UHF 2m/440 3/5.5db 38" UHF mt .....Dmfv	47.95	39.95
MC-1/NMO NMO-style magnet mt w/coax	28.95	
MC-1/UHF UHF-style magnet mt w/coax	28.95	
MC-2 Super suction & mag mt; NMO/UHF	37.95	
TA-1/NMO NMO-style trunk mt w/coax	28.95	
TA-1/UHF UHF-style trunk mt w/coax	28.95	
TA-2 Hvy duty rubber coated tnk lip mt; NMO/UHF	34.95	
DX-2 2m/440 450/300w duplexer/UHF conn	43.95	
DX-2/Lead 2m/440 450/300w duplexer/lead/UHF	46.95	
DX-2MN 2m/440 450/300w duplexer/N conn	43.95	
DX-2MNL 2m/440 450/300w duplexer/lead/N	46.95	
MT-1 2m/440 15/60w SWR/power meter	49.95	
SB-752 12vdc 6.5A port batt power pack	59.95	
SB-791 5A ps w/cig outlet; not for radio .Dmv	29.95	9.95
TX-3 2m/440/900-1.2 800/800/200w triplexer	54.95	

Antenna Specialists (ASP)

VHF/UHF ANTENNAS

AP-143 2m on glass cellular look-alike ant	$ 65.00	59.95
APR151.3 2m 3db on glass antenna	49.25	44.95
AP-453 440 on glass cell look-alike ant ..Dmfv	65.00	34.95
APR450.5G 440 5db on glass ant .....Dwfv	54.50	39.95
KAV-382 On glass replacement mtg kit	7.75	
ASPC201L 108-512MHz ¼ wv ⅜" hole ant ....Δw	22.75	12.95

HOLE PLUGS

ASC-34 For 1 3/16" hole .....Dmwfv	$ 4.75	49¢
ASC-37 For ⅜" hole .....Dmfv	2.25	
ASC-39 For ⅞" hole .....Dmwf	2.25	29¢

Antenna Supermarket (ANT)

Eavesdropper* 60-11m trap dipole SWL ant	$ 79.95	
*Specify **SO-239** or **twin**-lead		
SWL Sloper 120-11m SWL antenna	79.95	

ARTSCI (ART)

Amateur Handbook	$ 14.95	
Lost Users Manuals	19.95	
Riding the Airwaves with Alpha & Zulu	14.95	
US Repeater Guide	9.95	
US Repeater CD-ROM info plus U.S. hams	29.95	

ASTATIC (AST)

10DA-L Dynamic mic head (no stand or cable)	$ 69.99	49.95
D-104-L Crystal mic head (no stand or cable)	49.99	39.95
T-UG9 Amplified desk stand	52.00	49.95
T-UG9-D104 Amp mic, 6-wire w/stand	99.99	79.95
Night Eagle Brass/black crystal desk mic	129.99	99.95
MC-320 Crystal mic cartridge for D-104	19.99	
MC-321 Ceramic mic cartridge for D-104	19.99	

ASTRON (ASR)

RS-4L 3A ps, 4A surge, w/cig lighter socket	$ 57.95	49.95
RS-7A 5A power supply, 7A surge	68.95	59.95
RS-10A 7.5A power supply, 10A surge	85.95	69.95
RS-12A 9A power supply, 12A surge	99.95	79.95
RS-12S 9A ps, 12A surge, w/speaker	112.95	89.95
RS-20A 16A power supply, 20A surge	121.95	99.95
RS-35A 25A power supply, 35A surge	197.95	149.95
RS-35A/220V 220v 25A ps, 35A surge	217.75	169.95
RS-50A 37A power supply, 50A surge	285.95	219.95
RS-70A 57A power supply, 70A surge	339.95	259.95
RS-20M 16A ps w/meters, 20A surge	144.95	119.95
RS-35M 25A ps w/meters, 35A surge	204.95	169.95
RS-50M 37A ps w/meters, 50A surge	314.95	239.95
RS-70M 57A ps w/meters, 70A surge	372.95	289.95
VS-20ML Variable 16A ps/meters, 20A surge	170.95	139.95
VS-35M Variable 25A ps/meters, 35A surge	238.95	189.95
VS-50M Variable 37A ps/meters, 50A surge	330.95	259.95
RM-35M 25A rack mt ps/meters, 35A surge	318.95	249.95
RM-50M 37A rack mt ps/meters, 50A surge	354.95	279.95
RM-60M 50A rack mt ps/meters, 55A surge	467.95	359.95

ASTRON - continued

	Reg	Sale
12/115 200w solid state 12vdc-115vac inverter	79.95	59.95
2412 9A 22-32vdc to 13.8vdc converter	73.95	59.95
2412-20 16A 22-32vdc to 13.8vdc converter	103.95	79.95

AZDEN (AZD)

PCS-7500H 50w 6m FM Xcvr w/TTP mic		CALL
PCS-7800H 50w 10m FM Xcvr w/TTP mic		CALL
PCS-7000H 50w 2m FM Xcvr w/TTP mic		CALL
PCS-7200 25w 220 FM Xcvr w/TTP mic		CALL
PCS-7300H 35w 440 FM Xcvr w/TTP mic		CALL
PCS-9600D 35w 440 FM Xcvr/9600 baud		CALL
AZ-11 5w 10m FM HT/batt/cgr/TTP		CALL
AZ-21A 5w 2m FM HT/batt/cgr/TTP		CALL
AZ-61 5w 6m FM HT/batt/cgr/TTP		CALL
AD-16 DC power cord for HT		11.95
ARD-6M 6m HT gain antenna		44.95
ARD-10M 10m HT gain antenna		44.95
BP-11A Extra 5w battery		70.95
LC-16 Soft case		22.95
SDX-514W Speaker/mic		55.95
DM-10 20 ohm headphones for HF radio		55.95
HS-03 Boom mic/headphones for HF Xcvr ...†		49.95
PTT-01 Switch for boom mic/headphones		40.95
PTT-02 VOX for boom mic/headphones		50.95

AZIMUTH (AZI)

BP-3/7826 Nicads (3 AAA); 2 needed; ALT-6 Dm	$ 7.95	3.95
DSK/7194 Stainless desk stand; ALT-6 .....Dm	15.95	95¢
FML/7197 Flat stainless mtg plate; ALT-6 .Dm	12.95	95¢
PS-12/7822 AC power adapter/cgr; ALT-6 .Dm	9.95	95¢
RG-3/7830 Rain collector, self dump; ALT-6 Dm	49.95	19.95
AWZ WAZ QSL library .....Δm	19.95	14.95
GC-24 Large LCD 24-hour clock .....Δmf	29.95	24.95

B & K (B&K)

AUDIO TEST INSTRUMENT

2005A RF generator	$275.00	234.95

CAPACITANCE METERS

810A 200 pF to 20 mF capacitance meter	$134.00	114.95
815 Tester (cap/res/Hfe/diode/batt)	99.00	84.95
820 .1pF to 1F capacitance meter	279.00	229.95
830 200 pF to 200mF autoranging meter	325.00	259.95
875A Digital LCR meter	199.00	169.95
878 Universal hand-held LCR bridge	275.00	219.95

COUNTERS

1803C 100 MHz frequency counter	$209.00	169.95
1806 100 MHz multi-function counter	249.00	214.95
1807 1.3GHz 1 ppm frequency counter	299.00	259.95
1823 175 MHz universal counter	399.00	339.95
1856A 2.4 GHz 1 ppm multi-function ctr	499.00	399.95

CRT RESTORER/ANALYZERS

480 CRT restorer/analyzer	$739.00	629.95
490 Tri Dynamic restorer/analyzer	1049.00	899.95

DIGITAL PRODUCTS

DP-21 Digital logic probe	$ 34.00	29.95
DP-51 Digital probe .....Dm	95.00	59.95
DP-101 Digital pulsing probe .....D	111.00	94.95

GENERATORS

1280 Computer monitor video generator	$429.00	369.95
3001 Audio generator	79.00	66.95
3017A 2 MHz sweep/function generator .....D	339.00	269.95
3026 5 MHz sweep/function gen w/dig disp D	629.00	499.95
3030 .001 Hz-5 MHz sweep/function gen ....D	865.00	699.95
3040 Universal func gen w/freq counter .....D	1195.00	949.95
4010 2 MHz function generator	229.00	194.95
4011 5 MHz function generator w/counter	284.00	239.95
4017 10 MHz func gen w/counter/sweep	369.00	314.95
4040 20 MHz func gen/ctr/sweep/AM/FM	499.00	424.95

HIGH VOLTAGE PROBE

HV-44 Direct-reading 40kV DC probe	$109.00	89.95

ISOLATION TRANSFORMER

TR-110 Isolation transformer	$219.00	189.95

MULTIMETERS (ANALOG)

114 20,000 ohms/volt analog multimeter Dm	$ 42.00	24.95
114A 20,000 ohms/volt analog multimeter	42.00	39.95
117 Pocket size analog multitester	13.00	

B & K - continued

	Reg	Sale
214 30,000 ohms/volt analog multimeter Dm	55.00	39.95
214A 30,000 ohms/volt analog multimeter ...	55.00	46.95
300 Insulation tester	129.00	109.95

MULTIMETERS (DIGITAL)

330 750A AC multi-function clamp meter	$ 85.00	74.95
340A 300A multi-function clamp-meter	109.00	89.95
350A 1000A multi-function clamp-meter	145.00	124.95
366 600A AC/DC multi-func clamp meter	179.00	154.95
388A Test Bench DMM, 0.5% accuracy	119.00	99.95
389 Test Bench DMM, 0.25% accuracy	139.00	109.95
390 Test Bench DMM, 0.1% accuracy	159.00	134.95
391 Test Bench DMM, 0.05% accuracy	179.00	149.95
2700 Credit-card size bargraph DMM	33.00	29.95
2703A Tool kit DMM, basic model, 0.5%	39.00	34.95
2704A Tool kit DMM w/cap/transistor/diode ..	59.00	49.95
2706 Tool kit DMM, 2704A plus temperature .	79.00	69.95
2707 Tool kit DMM, 2704A plus logic & freq ..	89.00	76.95
2831A Digital bench multimeter	299.00	249.95
2832 3½-dig 0.5% lab multimeter	219.00	189.95
2833 4½-dig 0.05% true RMS multimeter	400.00	339.95
2835 3¾-dig 0.5% bench type LCD DMM	270.00	229.95
2860 3½-dig 0.5% ruggedized DMM	99.00	84.95
2912 3¾-dig 0.3% analog/bargraph meter .D	149.00	119.95
3000 Autobench DMM	270.00	229.95
TLA-20 Autobench test lead set	269.00	249.95

OSCILLOSCOPES

1422 20 MHz mini scope	1395.00	1099
1541C 40 MHz 6" dual trace scope	799.00	679.95
2000 Autobench oscilloscope	795.00	674.95
2120 20 MHz dual trace oscilloscope	549.00	449.95
2125 20 MHz dual time base oscilloscope	646.00	519.95
2160 60 MHz dual trace delayed sweep	1099.00	889.95
2190A 100 MHz three trace delayed sweep	1599.00	1359
2260 60 MHz analog scope/cursors/readouts	1399.00	1169
2522A Digital storage oscilloscope	1099.00	929.95
2560 60MHz DSO, cursors/readouts/RS232 ...	2395.00	2029

POWER SUPPLIES

1604 Portable isolated AC supply	$114.00	99.95
1646 0-16V, 0-10A power supply .....Dm	499.00	349.95
1651 Power supply; (2) 0-24vdc, .5A; 5V, 4A .	429.00	359.95
1653 0-150V, 2A isolated AC ps	319.00	279.95
1655 0-150V, 3A isolated AC ps/leak tester ..	529.00	449.95
1686 High current DC power supply	199.00	169.95
1688 3-14VDC, 25A non. power supply	299.00	259.95
1705 0-30VDC, 0-1A LED readout ps	299.00	259.95
1710 0-30VDC, 0-1A power supply	229.00	194.95
1711 0-60VDC, 0-2A power supply	309.00	264.95
1715 0-60VDC, 0-2A LED readout ps	379.00	324.95
1730 0-30VDC, 0-3A power supply	315.00	269.95
1735 0-30VDC, 0-3A LED readout ps	380.00	329.95
1740 0-60VDC, 0-4A power supply	499.00	419.95
1743 0-35VDC, 0-6A LED readout ps	499.00	419.95
1746 0-16VDC, 0-10A power supply	499.00	419.95
1760 (2) 0-30V, 2A; (1) 4-6.5V, 5A LED ps	649.00	549.95

SEMICONDUCTOR TESTERS

510 Portable transistor tester	$239.00	199.95
520B Industrial transistor tester	399.00	339.95
541 Component comparator .....Dm	449.00	299.95
545 Circuit analyzer analog signature	2950.00	2499
560A Programmable PC board tester	3500.00	2969
AK-560A Software package for 560A	495.00	399.95

TELEPHONE TEST INSTRUMENTS

1045A Telephone product tester	$599.00	499.95
1050 Telephone product analyzer	2260.00	1899

VIDEO TEST INSTRUMENTS

1211D Portable color generator	$235.00	199.95
1249A NTSC generator w/RGB	569.00	489.95
1251 NTSC signal generator	1195.00	999.95
1260 Deluxe NTSC signal generator	1995.00	1699

Hi! I'm Mike (N9LBQ) ...
I've got over two decades of Electronic Sales experience!
Call me at
1-800-558-0411

B & K - continued

	Reg	Sale
ACCESSORIES		
CP-3 AC/DC clamp meter	$ 86.00	79.95
PR-28 HV multimeter probe w/std dual banana .	59.00	
PR-32 RF detector/demod scope probe w/BNC	69.00	59.95
PR-37G Gray dlx 10:1 direct BNC probe .....Dm	54.50	39.95
PR-37R Red dlx 10:1 direct BNC probe .....Dm	54.50	39.95

Other accs available on special order. B & K stocked only at Milwaukee. Call Ron Glisch for B & K.

B & W COAX SWITCHES (B&W)

CSR-5G 5-position, side connectors	$ 51.50	49.95
CS-6G 6-position, for desk/wall mounting	51.50	49.95

Note: Above switches provide grounding of unused terminals, & are supplied w/face plates & knobs.

LOW-PASS FILTERS

FL-10/1500 1.5-30 MHz, 1kw, 52 ohms	$ 50.00	
FL-10/1500/70 1.5-30MHz/1kw/72 ohm ...Dm	55.00	14.95

ANTENNAS

AP-10 57" portable 40/20/15/10/6/2m ant ...	$ 69.95	
AT-55 40/20/15/10m 55' trap antenna	79.95	74.95
AT-55K As above, but kit .....Δm	69.50	49.95
AT-110 80/40/20/15/10m 110' trap antenna	89.50	84.95
AT-110K As above, but kit	76.95	69.95
AS-160 160/80/40/20m 137' trap dipole	149.50	139.95
AS-80 80/40/20m 78' trap dipole	115.75	109.95
AS-40 40/20/15/10m 40' trap dipole	149.50	139.95
AS-20 20/15/10m 23' trap dipole	115.75	99.95
AXS-160 160/30m 96' trap dipole	115.75	99.95
AXS-80 80/40/15m 72' trap dipole	115.75	99.95
AC-3.5-30 80-10m 8-band 90' dipole	198.00	179.95
AC-1.8-30 Continuous 1.8-30 MHz antenna ..	198.00	179.95
BWD-1.8-30 1.8-30 MHz 90' folded dipole	198.00	179.95

BELDEN (BEL)

52 OHM COAXIAL CABLE

8216 RG-174 (sub-miniature) .....per ft.		26¢
8216 .....100 ft. Roll	37.29	24.95
8216 .....500 ft. Roll	129.87	89.95
8216 .....1000 ft. Roll	259.74	169.95
9201 RG-58 (solid center) .....per ft.		20¢
9201 .....100 ft. Roll	29.74	18.95
9201 .....500 ft. Roll	109.89	79.95
9201 .....1000 ft. Roll	216.45	139.95
8240 RG-58U (solid center) .....per ft.		26¢
8240 .....100 ft. Roll	38.20	24.95
8240 .....500 ft. Roll	131.00	89.95
8240 .....1000 ft. Roll	262.00	169.95
8259 RG-58AU (stranded center) .....per ft.		29¢
8259 .....100 ft. Roll	43.00	26.95
8259 .....500 ft. Roll	137.00	89.95
8259 .....1000 ft. Roll	276.00	169.95
8219 RG-58AU (stranded, foam) .....per ft.		33¢
8219 .....100 ft. Roll	57.25	29.95
8219 .....500 ft. Roll	155.00	99.95
8219 .....1000 ft. Roll	387.50	189.95
8262 RG-58C (non-contaminating) .....per ft.		36¢
8262 .....100 ft. cut		32.95
8262 .....500 ft. Roll	173.00	119.95
8262 .....1000 ft. Roll	346.00	219.95
9258 RG-8X (stranded, foam) .....per ft.		39¢
9258 .....100 ft. Roll	81.25	34.95
9258 .....500 ft. Roll	217.56	109.95
9258 .....1000 ft. Roll	490.00	199.95
8237 RG-8U .....per ft.		64¢
8237 .....100 ft. Roll	102.00	59.95
8237 .....500 ft. Roll	390.00	249.95
8214 RG-8U (foam) .....per ft.		59¢
8214 .....100 ft. Roll	101.00	54.95
8214 .....500 ft. Roll	452.00	249.95
8214 .....1000 ft. Roll	898.00	479.95
9913 RG-8U (low loss) .....100 ft. Roll	113.00	59.95
9913 .....250 ft. Roll	244.00	129.95

BELDEN - continued

	Reg	Sale
9913 .....500 ft. Roll	486.00	229.95
9251 RG-8A (non-contaminating) .....per ft.		87¢
9251 .....100 ft. Roll	132.09	79.95
9251 .....500 ft. Roll	492.84	299.95
8267 RG-213 (non-contaminating) .....per ft.		76¢
8267 .....100 ft. cut		69.95
8267 .....500 ft. Roll	597.18	299.95
8242 RG-9U (double shielded) .....per ft.,m		4.95
8242 .....100 ft. Roll,m	715.00	349.95

72 OHM COAXIAL CABLE

8241 RG-59U (72 ohm, solid center) ....per ft.		28¢
8241 .....100 ft. Roll	44.00	24.95
8241 .....500 ft. Roll	123.00	79.95
8241 .....1000 ft. Roll	246.00	149.95
8238 RG-11 (72 ohm, stranded center) per ft.		79¢
8238 .....100 ft. Roll	124.32	69.95
8238 .....500 ft. Roll	470.64	279.95
8213 RG-11 (72 ohm, solid, foam) .....per ft.		69¢
8213 .....100 ft. cut		59.95
8213 .....500 ft. Roll	360.00	239.95

ROTOR CABLE

8484 4-wire; 4-20 ga; U-105 .....per ft.		28¢
8484 .....100 ft. Roll	48.00	24.95
8484 .....500 ft. Roll	185.00	99.95
8484 .....1000 ft. Roll	370.00	189.95
8448 8-wire; 2-18, 6-22 ga; CD-45/HAM-IV per ft.		49¢
8448 .....100 ft. Roll	103.75	44.95
8448 .....500 ft. Roll	412.50	169.95
8448 .....1000 ft. Roll	820.00	329.95
9405 8-wire; 2-16, 6-18 ga; AR-40/HAM-IV/T²X per ft.		59¢
9405 .....100 ft. cut		54.95
9405 .....500 ft. Roll	585.00	249.95
9405 .....1000 ft. Roll	1167.50	489.95

ANTENNA WIRE

8000 No. 14 stranded ant wire .....per ft.		21¢
8000 .....100 ft. Roll	30.50	17.95
8000 .....1000 ft. Roll	275.00	159.95

No. 8 ALUMINUM GROUND WIRE

8018 Multiples of **50** ft. .....each	$ 19.00	12.95
8018 .....500 ft. Roll	150.00	99.95

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

FOAM COAX w/PL-259s ON BOTH ENDS

9349 3' RG-58AU foam	$ 19.32	14.95
9350 15' RG-58AU foam	21.63	16.95
9347 20' RG-58AU foam, 1 PL-259 .....Dmwfv	19.32	6.95
9352 50' RG-58AU foam	32.13	24.95
9354 50' RG-8U foam	60.90	46.95
9355 75' RG-8U foam	84.00	64.95
9356 100' RG-8U foam	101.85	79.95

BELMERIT (BLM)

DM-10 3½-digit digital multimeter ..... Δmw	$ 19.95	14.95
DM-10S 3½-digt dig multimeter w/case .....Dv	24.95	19.95
DM-3000 Wide range dig multimeter ...Dmwv	54.95	39.95
DM-3050 Wide range dig multimtr/freq test Dmwv	59.95	49.95

BENCHER (BEN)

BY-1 Iambic keyer paddle w/black base	$ 72.95	69.95
BY-2 Iambic keyer paddle w/chrome base	89.95	84.95
BY-3 Iambic keyer paddle, gold plated	249.95	199.95
BY-4 Iambic paddle/blk base/gold components	149.95	129.95
ST-1 Single lever keyer paddle, black base	72.95	69.95
ST-2 Single lever kyr paddle, chrome base	89.95	84.95
ST-3 Single lever keyer paddle, gold plated	249.95	199.95
ST-4 Sgl lever paddle/blk base/gold components	149.95	129.95
RJ-1 Dlx hand key w/navy knob/black base	69.95	
RJ-2 Dlx hand key w/navy knob/chrome base	79.95	
ZA-1A 3.5-30 MHz 1:1 balun	34.95	
HWK Balun hardware kit for 2" boom	8.95	
YA-1 1kw low pass filter	54.95	

BIRD (BIR)

43 Thruline Directional wattmeter, SO-239s . $239.00

 Shop the Coupon/Rebate Board on our BBS for up-to-the-minute deals from the Manufacturers available right now!

BIRD - continued

	Reg	Sale
4300-400 Peak reading conversion kit	115.00	
43P Peak reading directional meter, SO-239s	359.00	
4431 Wattmeter, variable RF tap, SO-239s	421.00	
Elements (Table 1) **50H-1000H** .....each	80.00	
Elements (Table 1) **2500H, 5000H** .....each	114.00	
Elements (Table 1) 25-1000 MHz .....each	65.00	
Low-power elements (Table 2) .....each	86.00	

TABLE 1 Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400 1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

800-2 2.5w 800-950MHz element .....Dmw	86.00	69.95
CC-1 Carrying case	43.00	
EC-1 Element case	33.00	
80F 5w dummy load w/type N female .....Δmf	72.00	49.95
8080 25w dummy load w/type N male QC	102.00	
8085 50w dummy load w/type N male QC	146.00	
4273 1.5-35 MHz variable RF sig sampler*	123.00	
4273-100 For Bird equipment installation	133.00	
4275 20-1000 MHz variable RF sampler*	118.00	
*2 QC connectors required - not included		
4275-100 For Bird equipment installation	133.00	
4304A 25-1000 MHz 500w wattmeter	470.00	

QUICK CHANGE CONNECTORS (QC)

4240-050 UHF female (SO-239) .....each	$ 8.00	
4240-179 UHF male (PL-259) .....each	43.00	
4240-062 Type N female .....each	8.00	
4240-063 Type N male .....each,Δmf	18.00	14.95
4240-125 BNC female .....each	18.00	
4240-132 BNC male .....each,Δmwf	51.00	24.95

Other Bird items available on special order

BUCKMASTER (BUC)

HamCall CD-ROM ham listings; IBM/Mac	$ 50.00	

BUTTERNUT (BUT)

HF-6VX 80/40/30/20/15/10m 26' vert ant	$247.00	199.95
HF-9VX 80/40/30/20/17/15/12/10/6m vert	306.00	249.95
A17-12 17 & 12m kit for HF-6VX	54.00	49.95
CPK Counterpoise kit	61.00	54.95
MPS Mounting post sleeve	8.00	
RMK-II Roof mounting kit w/radials	86.00	76.95
STR-II Radial kit only	54.00	49.95
TBR-160S 160m resonator for HF-6VX	89.00	79.95
HF-2V 80/40m 32' vertical	231.00	189.95
30-MRK 30m resonator for HF-2V	54.00	49.95
TBR-160S 160m resonator	89.00	79.95
HF-5B 2 el 20/17/15/12/10m butterfly beam	376.00	299.95
10-11 2 el butterfly beam; 10 & 11m .....Δwv	166.00	79.95

CES (CES)

410 Personal Patch interconnect	$250.00	169.95
SSI-68 Simplex autopatch	460.00	269.95
SDI-50 Dlx splx/dplx autopatch/rptr controller	760.00	399.95

	Reg	Sale

CQ (CQX)

1996 Amateur Radio Calendar	$ 9.95	
1996 Radio Classics Calendar	9.95	
Amateur Radio Almanac	19.95	
Beginners Guide to Amateur Radio	5.95	
Building and Using **Baluns** and Ununs	19.95	
Buyers Guide	5.95	
Contest Video Getting Started in Contesting	19.95	
DXing Video Getting Started in DXing	19.95	
Ham Sat Video Getting Started Amateur Satellites	19.95	
Ham Video Getting Started in Ham Radio	19.95	
Lew McCoy on Antennas	15.95	
Packet Radio Operator's Manual	15.95	
Packet Video Getting Started in Packet Radio	19.95	
Quad Antenna Book	15.95	
Shortwave Propagation Handbook	19.95	
Vertical Antenna Hand**book**	9.95	
VHF How To Book	15.95	
VHF Video Getting Started in VHF	19.95	

CAMBRIDGE (CAM)

The Art of Electronics (book)	$ 59.95	

CENTAUR (CEN)

CP-1 Cricket Pulser Station tuning accessory	$ 67.00	

CIRCUIT WORKS (CIR)

Conductive Pen/CW2200STP	$ 11.95	

CLOCKS

AEA **World Clock**	$ 25.00	
BMI **972A** 12" 12-hour wall clock	37.95	
BMI **972AD** 14" 12/24-hour wall clock	39.95	
BMI **973A** 12" 24-hour wall clock	59.95	49.95
MFJ **105B** 24-hour quartz wall clock	19.95	
MFJ **107B** 24-hour digital clock	9.95	
MFJ **108B** 24/12-hour dual disp digital clock	19.95	
MFJ **112** Deluxe world map clock	24.95	
MFJ **114** Large LED 24-hour clock	39.95	

COAX SEAL (UNV)

104 ½" x 60" coax seal	$ 2.49	

COMET (CMT)

MOBILE ANTENNAS

B-10 2m/440 2.15db 12" cell look-alike ant	$ 39.95	
B-10NMO 2m/440 2.15db 12" cell look-alike NMO	39.95	
B-20 2m/440 2.15/5db 30" cell look-alike ant	58.95	
B-20NMO 2m/440 2.15db/5db 30" cell look NMO	58.95	
CA-28HR 10m 7' fold-over mobile ant .....Dmv	69.95	29.95
CA-220MR 220 4.2db 3' 3" fold-over ant	49.95	
CA-2405 2.4 GHz 7db 17" fg type N ant ...Dm	59.95	49.95
CA-HV 40/15/10/6/2m 5' 10" mobile ant	149.95	139.95
L-14 20m loading coil for CA-HV	36.95	
CHL-21J 2m/440 0/2.15db 12" mob ant ....Dv	29.95	16.95
CHL-28J 2m/440 3/5.5db 36" mobile ant	39.95	
CHL-28JNMO 2m/440 3/5.5db 36" NMO ant	39.95	
CHL-62S 2m/440 3.5/6db 42" mobile ant	54.95	
CHL-62SNMO 2m/440 3.5/6db 42" NMO ant	54.95	
CHL-350 10/6m 0/2.15db fold-over 7' ant	79.95	
CMW-202N 900 MHz 5.1db 18" type N ant	42.95	
CX-224 2m/220/440 2.15/3.2/5.5db 42" mobile	82.95	
CX-224NMO 2m/220/440 2.15/3.2/5.5db 42" NMO	82.95	
FJ-15S 6m/2m/440 2.15/4.5/72.db 5'mob Dmv	109.95	99.95
FL-7HA 40m 40" mobile antenna	82.95	
FL-14HA 20m 37" mobile antenna	82.95	
FL-28HA 10m 33" mobile antenna	82.95	
FL-50HA 6m 33" mobile antenna	82.95	
FS-74B 440/1.2 black 5.1/7.2db 22" N mob	79.95	
FS-92B 2m/440/1.2 2.1/4.1/6.8 23" type N	82.95	
HA-4S 40/15/12/10m 4' 5" mobile ant	199.95	179.95
L-14HS 20m loading coil for HA-4S	39.95	
HP-32 2m/440 3/5.5db 34" 350/250w ant	89.95	
SB-2 2m/440 2.15/3.8db 18" mobile ....Dmfv	41.95	
SBB-2 2m/440 2.15/3.8db 18" black mobile	41.95	
SB-2NMO 2m/440 2.15/3.8db 18" NMO Dmwfv	41.95	
SBB-2NMO 2m/440 2.15/3.8db 18" blk NMO	41.95	
SB-5 2m/440 3/5.5db 38" mobile ant ..Dmwv	62.95	
SBB-5 2m/440 3/5.5db 38" black mobile ant	62.95	
SB-5NMO 2m/440 3/5.5db 38" NMO ...Dmwfv	62.95	

COMET - continued

	Reg	Sale
SBB-5NMO 2m/440 3/5.5db 38" black NMO	62.95	
SB-7 2m/440 4.5/7.2db 4' 7" mobile ..Dmwfv	85.95	
SBB-7 2m/440 4.5/7.2db 4' 7" black mob ant	85.95	
SB-7NMO 2m/440 4.5/7.2db 4' 7" NMO Dmwfv	85.97	
SBB-7NMO 2m/440 4.5/7.2db 4' 7" blk NMO	85.97	
SBB-15 6m/2m/440 2.15/4.5/7.2db 5' mob	109.95	99.95
SB-25 2m 4.1db 4' 8" mobile antenna	54.95	
SB-25NMO 2m 4.1db 4' 8" NMO mobile ant	54.95	
SB-44 440 5db 29" mobile antenna	54.95	
SB-83 2m/440/cell 3/6/8.4db 35" type N ant	78.95	
SB-94 2m/440/1.2 2.15/5.1/7.2db 24" N ant	75.95	
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N	89.95	
SB-123 1.2GHz 7.2db 24" type N mobile ant	54.95	
SB-214W 2m/220 3' 1.7/3.4db mob ant	62.95	
SF-245 2.4 GHz 7db 18" fg type N ant	61.95	
WP-57 2m/440 2.15/5.2db 30w on glass ant .. Dm	129.95	69.95
WP-75B 440/1.2 4.9/6.5db 30w on glass BNC .... Dm	144.95	79.95
Z-750 2m/440 2.1/5.5db 39" theft resistant	66.95	
Z-780 2m/440 4.5/7.2db 5' theft resistant	89.95	

MOBILE MOUNTS, ETC

3D4M Mobile mt, 13' coax w/UHF connectors	$ 24.95	
3D4N Mobile mt, 13' coax w/type N	28.95	
3D5M Mobile mt, 16.5' coax w/UHF connectors	27.95	
5D4N Roof mount, 13' coax w/type N .....Dmw	34.95	
AD-10N N-NMO mount adapter	17.95	
AD-15M UHF-NMO mount adapter	17.95	
BMG-BB Med duty blk mag mt, BNC/BNC ...Dmf	39.95	24.95
BMG-M Med duty blk mag mt/UHF conn ...Dfv	42.95	29.95
CA-MS1 Mag mt only, no coax; add 3D4M, etc	26.95	
CG-4M RS-2 gutter mount w/13.5' coax	34.95	
CK-3M Dlx 2-step 10' cable w/UHF connectors	33.95	
CK-3M5 Dlx 2-step 16.5' cable w/UHF connects	39.95	
CK-5M Dlx 13' cable w/UHF conn .....Dv	37.95	34.95
CK-5N Dlx cable assembly w/type N	47.95	
CM-5M Hvy duty mag mt, coax, max 4' ant	42.95	
CQ-5M Dlx black QD trunk lip mt w/17' coax	66.95	
CT-5M Trunk lip mount w/17' coax	40.95	
GR-5M Dlx tnk lip mt w/ coax; matches SB	67.95	
GR-5N Dlx N tnk lip mt w/ coax; matches SB	69.95	
MG-SRB Med duty mag mt w/UHF/BNC ..Dmwf	38.95	26.95
MG-SRM Med duty mag mt w/UHF conn ..Dmwfv	36.95	26.95
MS-3FVMM Std duty mag mt w/UHF conn ...Dmf	43.95	
MS-3FVNN Std duty mag mount w/type N	49.95	
MS-5LXNN Hvy duty magnet mt/type N .....Dw	61.95	58.95
RS-2 Small gutter mount	22.95	
RS-6 Pipe clamp mount	29.95	
RS-9 Trunk lip mount, no coax	13.95	
RS-20 Gtr mt; small/med ants, no coax Dmwfv	29.95	26.95
RS-21 Adj 360 degree hatch/tnk mt, no coax	34.95	
RS-25 Adj pipe clamp mount, no coax ..Dmwf	38.95	34.95
RS-80 Adjustable gutter mt, no coax ..Dmwfv	32.95	29.95
RS-81 Adj trunk/hatch mount, no coax	38.95	
RS-500 Mini heavy duty gutter mount	29.95	
RS-520 Mini heavy duty trunk/hatch mount	29.95	
RS-820 Low profile trunk lip mount, no coax	48.95	
RS-850 Lug rack/to 1.75" pipe mt, no coax	42.95	
TS-1M Trunk lip mt w coax .....Dwfv	45.95	39.95
TS-103NN Trunk lip mt w/coax, type N ..Dmwf	39.35	24.95
TS-106NN Dlx tnk lip mt/coax, type N .Dmwfv	55.95	26.95
WS-1M Window clip mt w/UHF connectors	64.95	
5D-FB Low loss 7.3mm (¼") coax 100m,Δm	199.95	69.95
5D-NJC Female N connector; 5D coax ...Δm	7.95	2.95

BASE STATION ANTENNAS

CA-62DB 52-54MHz 6.5db 21.75' base ant	$164.95	154.95
CA-350DB 10/6m 2.15/6.5db 22' 7" ant	349.95	299.95

On major products ask your salesperson about ...

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- **Latest Sale Prices**
- **Monthly specials**
- **Coupons, etc.**

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Info also available on the **AES® BBS**
1-414-358-3472

COMET - continued

	Reg	Sale
CA-712EF 440 9db 10' 5" base antenna	139.95	129.95
CA-1243E 440/1.2 GHz 6/8.4db 3' 4" type N	94.95	
CA-1243Z 440/1.2 GHz 9.4/12.8db 7' type N	161.95	149.95
CA-ABC21 2m 3.4db 4' 7" base antenna	59.95	
CA-ABC22A 2m 6,5db 9' 5" base/rptr ant	79.95	
CA-ABC23 2m 7.8 db 13' 4" base/rptr ant	135.95	124.95
CA-F22GF 136-175 6db 8' 10" tunable ....T	169.95	159.95
CA-F72GF 440-470 6db 3' 6" tunable ant	129.95	119.95
CA-Super22 220 6.6db 8' 2" base ant	159.95	149.95
CFC-771 900MHz 4.5' 7.14db N base/rptr	97.40	89.95
CMR-241 2m/440 4.5/7.2db 6.5' rptr ant	174.95	164.95
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant	219.95	199.95
CX-902 2m/440/1.2 6.5/9/9db 10' N ....Dwv	189.95	119.95
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam	149.95	139.95
DS-15 6m/2m/440/900/1.2 discone antenna	129.95	119.95
FP-19 900 MHz 16db 7' 4" type N base/rptr	121.95	112.95
GP-3 2m/440 4.5/7.2db 5' 11" base/rptr ant	121.25	112.95
GP-6 2m/440 6.5/9db 10' 2" base/rptr ant	174.95	164.95
GP-9 2m/440 8.5/11.9db 17' 8" base/rptr	224.95	199.95
GP-9N 2m/440 8.5/11.9db 17' 8" N base/rptr	224.95	199.95
GP-15 6/2m/440 3/6.2/8.6db 8' base	179.95	169.95
GP-21/CA-1221S 1.2 14.8db 8.5' N base/rptr	189.95	169.95
GP-24 2.4GHz 12.4db 2' type N base/rptr	229.95	199.95
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N	149.95	139.95
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant	234.95	214.95
GPX-2010 2m/440 9.5/13.2db 23' 4" base/rptr	429.95	389.95
NCG-1422B 2m/220 2.15/3.4db 3' 8" ....Dwf	119.50	59.95
PYA-913 900MHz 13el 15.8db 4' 8" type N beam	169.95	159.95

DUPLEXERS AND TRIPLEXERS

CF-142 1.3-150/200-480 600/400w UHF/leads	$ 79.95
CF-360A 1.3-30/50-470 600w UHF w/leads	74.95
CF-413A 440/1.2 500/200w N w/leads	74.95
CF-413B 440/1.2 500/200w N/UHF/N leads	74.95
CF-416A 2m/440 800/500w UHF w/leads	58.70
CF-416C 2m/440 800/500w N/UHF/N leads	58.70
CF-416W 1.3-250/400-1400 400/200w N/leads	84.95
CF-530 1.3-90/125-470 600w UHF w/leads	74.95
CF-4130A 440/1.2 500/200w N, no leads	74.95
CF-4160I 2m/440 800/500w UHF/UHF/N, no leads	52.25
CF-4160J 2m/440 800/500w SO239, no leads	58.95
CF-4160K 2m/440 800/500w all UHF, no leads	52.25
CFX-324A 2m/220/440 600w UHF w/leads	99.95 / 94.95
CFX-324B 2m/220/440 600w UHF, no leads	95.00 / 89.95
CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads	89.95
CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads	89.95
CFX-514 HF/2m/440 800/800/500w UHF w/leads	84.95
CFX-514J HF/2m/440 800/800/500w UHF, no leads	84.95
CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads	84.95
CFX-4310C 2m/440/1.2; Kenwood TM-741A/941A	84.95
CFX-5140 HF/6m/2m/440 800/800/500w UHF, no leads	84.95

HT AND HAND-HELD SCANNER ANTENNAS

CH-32 2m/440 1.75" BNC antenna	$ 33.95
CH-72S 2m/440 0/3.2db 15" BNC antenna	33.95
CH-701X 2m/440/900 2/3.4/5.5db 19" BNC	54.95
CH-720C 2m/440 semi-rigid 0/3.8db 18" BNC	39.95
CH-722SA 2m/440 3/5.5db BNC whip ant	45.95
CY-1205 1.2 GHz 11db 7" BNC HT beam	41.45
SH-55 2m/440 1.5/3.2db 15" BNC ant	33.95
SH-95 2m/440/1.2 1.5/2.15/5.5db BNC ant	49.95
SMA-3 2m/440 1.2/1.7db 9.75" SMA ant	41.95

SWR/POWER METERS & MINIMETERS

	Reg	Sale
CD-160H 1.6-60 MHz 2kw SWR/power ..... Dm	$169.95	109.95
CD-270 140-525 MHz 200w SWR/power ...Dm	159.95	99.95
CM-120 1240-1300 MHz type N minimeter	99.95	
CM-400 430-450 MHz minimeter .....Dm	51.95	34.95
CM-400N 430-450 MHz N minimeter .....Dw	55.50	34.95
CM-690 1.9-60 MHz 20/150w minimeter	79.95	
CM-720 140-150/430-450 MHz minimeter	79.95	
CM-720N 140-150/430-450 type N minimeter	84.95	
CM-900 900-920 MHz type N minimeter	99.95	

Hi! I'm TOM, N9UUJ ...
Phone in during afternoon hours for least chance of finding busy lines!

COMET - continued

	Reg	Sale
CM-1200 1240-1300 MHz N minimeter .....Df	89.95	69.95
CMX-1 1.8-60 MHz 2000w SWR/pwr/rem head	209.95	189.95
CMX-2 1.8-200MHz 200w SWR/pwr/rem head	199.95	179.95
CMX-3 140-525 MHz 200w SWR/pwr/rem head	189.95	169.95
EKS-3 10' remote head extension cable	23.95	
NCG-2000 140-525MHz 200w SWR/pwr ....Dmv	99.95	79.95

ACCESSORIES

CS-290P 1500MHz 150w N lightning protect	$ 39.95
CS-400P 500MHz 250w lightning protect	34.95
CSP-30 Mini speaker w/magnet mt	34.95
CSP-80 Mini spkr w/mag mt, noise filt, mute	39.95
CSW-20 0-950MHz coax switch .....Df	57.60 / 44.95
CSW-20N 0-1300MHz N coax switch ..Dmwfv	99.95 / 69.95
HM-P2F Mini spkr/mic; Ali/Ico/Sta/Yae	32.95
HM-P2K Mini spkr/mic for Kenwood	32.95
HM-P4F Mini "HT" spkr/mic; Ali/Ico/Sta/etc	32.95
HM-P4K Mini "HT" spkr/mic for Kenwood	32.95
HM-P4Y Mini "HT" spkr/mic for Yaesu	32.95

Communications Specialists (COM)

SS-32P/SS-32PA Prog CTCSS encoder	$ 28.95
SS-32SMP Hybrid micro-sized encoder	27.95
TE-64 64-tone CTCSS/burst switch encoder	79.95
TS-32P 32-tone CTCSS prog encoder/decoder	57.95
DTD-1 DTMF decoder	59.95

CONNECTORS

AMPHENOL COAX CONNECTORS (AMP)

83-1SP-1050 Male coax plug (PL-259)	$ 1.81
83-1SP Silver plated coax plug (PL-259)	2.81
Van Gorden (VAN) **silver plated** teflon PL-259	2.99
83-185 Reducer for RG-58 (UG-175)	.59
83-168 Reducer; RG-59/RG-8X (UG-176)	.55
83-1AP Right angle adaptor (UG-646)	5.55
83-1J Double female adaptor (PL-258)	3.19
83-1R Female chassis mt socket (SO-239)	1.95
83-1H Hood for in-line use (UG-106)	3.85
83-1T T-connector adaptor (M-358)	7.92
83-877 Double male adaptor	10.61
83-878 Single hole ⅝" chassis socket Δmwfv	2.51 / 1.49
31-002 BNC male connector for RG-58	3.28
31-012 BNC male connector; RG-59/RG-8X	3.73
31-221 BNC female chassis socket ...Δmwfv	1.92 / 1.49
82-24 Type N female chassis mt socket	4.48
82-61 Type N male connector for RG-8	7.13
82-64 Type N right angle adaptor .....Δmwfv	19.41 / 12.95
82-202-1006 Type N male; Belden 8214/9913	6.83
82-209 Type N female in-line for RG-8	7.10
34025 Type N male connector for RG-58	6.11

AMPHENOL COAX ADAPTORS (AMP)

2900 SO-239 to BNC male adaptor	$ 9.23
4400 SO-239 to type N male adaptor	12.76
34125 Type N female - PL-259 adapt	19.02
45250 Type N double male adaptor .....Dmwfv	16.19 / 9.95
31-28 BNC female to PL-259 adaptor	8.51
83-10 SO-239 to Motorola/phono plug Dmwfv	10.84 / 8.95

AIM COAX CONNECTORS & ADAPTORS (AIM)

25-7302 0-900MHz teflon ins PL-259 ....Dmv	$ 4.50
25-7351 Chassis mt SO-239 double female	5.10
25-7365 BNC female to SO-239	4.40
25-7420 BNC male to SO-239	3.30
26-8010 Type N double female	5.20
26-8011 Type N chassis mount	2.50
26-8015 N male to SO-239	7.40
26-8016 BNC female to N male	7.40
26-8017 BNC male to N female	7.40
27-8110 BNC female to RCA male	2.50
27-8120 BNC female to PL-259	3.20
27-8130 BNC double male	4.30
27-8140 BNC T; 2 female, 1 male	3.90
27-8142 BNC T, 3 male	8.40
27-8450 BNC chassis mt, 4 screw holes	3.00
27-8460 ⅜" hole BNC chassis mt	1.40
27-8470 Dual BNC chassis mount	4.50
29-3855 BNC female to SMA male	8.80
29-4140 SO-239 to mini PL-259	5.00

CONNECTORS UNLIMITED (CON)

306 SO-239 to BNC male adaptor	$ 2.76

CONNECTORS - continued

	Reg	Sale
1721 7-pin DIN plug	1.38	
X-3013 8-pin female mic plug	3.11	

SWITCHCRAFT MICROPHONE CONNECTORS (SWI)

480 .206" 3-cond mic plug (Collins) ..... Δm	$ 12.50	8.95
S-260 .206" 3-cond mic plug (Drake)	8.50	

Switchcraft 1/4 " Plugs w/Solder Terminals (SWI)

267 3-conductor, plastic handle	$ 5.50	
237 3-cond, plastic handle, rt angle plug Δm	5.15	1.95
260 3-conductor w/screw terminals	6.50	
297 3-conductor, metal handle	6.55	
250 2-conductor, plastic handle	3.90	
220 As abv, w/screw terminals, rt angle plug	5.70	
280 2-conductor, metal handle	4.85	

SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)

3501MC Phono plug with cable clamps ...Δm	$ .90	49¢
3502 Shielded phono plug	2.35	
3507 RF-type phono plug	3.30	

VANCO MICROPHONE CONNECTORS (VCO)

CBC-2 2-pin female mic plug	$ 3.14
CBC-3 3-pin female mic plug	2.99
CBC-4 4-pin female mic plug	4.04
CBC-4P Panel mt 4-pin male	1.99
CBC-5 5-pin female mic plug	3.87
CBC-5P Panel mt 5-pin male	1.99
CBC-6 6-pin female mic plug	4.06
CBC-6P Panel mt 6-pin male	3.98
CBC-8 8-pin female mic plug	5.89
CBC-8P Panel mt 8-pin male	5.57

KENWOOD DIN PLUGS (KEN)

7-pin DIN plug	$ 3.92
8-pin DIN plug	4.51
13-pin DIN plug	6.76

VANCO MINI PHONE PLUGS (VCO)

P-25 2.5mm sub-miniature phone plug	$ .99
P-35 3.5mm miniature phone plug	.99
P-12V Cig lighter plug w/leads	2.91

Connect Systems (CSY)

CS-700 Simplex interconnect	$485.00	359.95
CS-800 Full duplex patch & repeater controller	485.00	359.95
CS-900 Simplex interconnect	485.00	359.95
Private Patch V Multi-mode interconnect	615.00	419.95
9801 Elec voice delay (EVD); Private Pch V	141.50	129.95
8200D Full duplex patch/repeater controller	713.00	469.95
CD-1 DTMF/CTCSS/DCS decoder unit	265.00	219.95
CD-2 DTMF/CTCSS/DCS decoder unit/RS-232	325.00	269.95
CD-2P PC application program for CD-2	113.00	99.95
LT-2 Trunking decoder unit/RS-232 .....**S.O.**	425.00	349.95
LT-2P PC application program for LT-2 .**S.O.**	113.00	99.95
CS-1688 Deluxe DTMF decoder/controller	213.00	189.95

COYNE (COY)

HAM RADIO TEST GENERATOR FOR MACINTOSH

MacHam no code **Tech**nician, includes Novice 2A	$ 39.95
MacHam General	34.95
MacHam Advanced	34.95
MacHam Extra	34.95
MacHam Radio Morse Code training software	39.95

CROSS DEVICE (CRS)

STUF Coax connector waterproofing filler	$ 4.50

CROWN METAL (CRO)

SOLID BASE COPPERWELD ANTENNA WIRE

AN-122 100 feet No. 12	$ 24.95	
AN-123 150 feet No. 12	29.95	
AN-124 250 feet No. 12	49.95	
AN-126 500 feet No. 12	84.95	79.95
AN-128 1000 feet No. 12	154.95	129.95
AN-142 100 feet No. 14	19.95	
AN-143 150 feet No. 14	24.95	
AN-144 250 feet No. 14	29.95	
AN-146 500 feet No. 14	54.95	
AN-148 1000 feet No. 14	104.95	89.95
AN-181 250 feet No. 18	14.95	
AN-182 500 feet No. 18	24.95	

CUSHCRAFT (CUS)

	Reg	Sale
VHF/UHF FM BEAMS (Vertical polarization)		
A148-3S 2m, 3 el wideband beam	$ 46.00	43.95
A148-10S 2m, 10 el wideband beam	85.00	74.95
A148-20S 2 A148-10S vert stacked	233.00	186.95
A449-6S 440 MHz, 6 el, 3' boom, 10 db	59.00	56.95
A449-11S 440 MHz, 11 el, 4.5' boom, 13 db	83.00	74.95
A270-6S 2m/440, 3/3 el, 2.8' boom, 7.8 db	73.00	64.95
A270-10S 2m/440, 5/5 el, 6.17' boom, 10 db	99.00	79.95
FM VERTICAL STACKING KITS* (Adds 3 db)		
A14-VPK Stacking kit for 2 A147-4 .....Dmwfv	$ 61.00	9.95
A14-SK Harness only for 2 A148-3S	48.00	44.95
A148-VPKS Stacking kit for 2 A148-3S/10S	108.00	89.95
A148-SK Harness only for 2 A148-10S	48.00	44.95
A449-VPKS Stacking kit; 2 A449-6S/11S	65.00	62.95
A449-SK Harness only for 2 A449-6S/11S	48.00	44.95
*Prices are for stacking kits only		
FM RINGOS - 1/2 Wave Verticals - 3.75 db		
AR-10 10m FM Ringo, 1000w	$ 71.00	62.95
AR-6 6m FM, 1000w	71.00	62.95
AR-2 2m FM, 1000w	50.00	39.95
AR-220 220 MHz FM, 500w	49.00	39.95
AR-450 440 MHz FM, 500w	49.00	39.95
AR-270 2m/440 MHz FM, 250w, 3.7/5.5db	88.00	69.95
AR-270B 2m/440 MHz FM base ant	128.00	99.95
RINGO RANGERS - FM Verticals - 6 db		
ARX-6 6m FM Ringo Ranger	$252.00	199.95
ARX-2 2m FM Ringo Ranger	60.00	49.95
ARX-2B 2m FM Ringo Ranger II, 1000w	73.00	59.95
ARX-220B 220 FM Ringo Ranger II, 500w	73.00	59.95
ARX-450B 440 FM Ringo Ranger II, 500w	73.00	59.95
ARX-450BN 440 FM Ringo Ranger II w/type N	88.00	74.95
HIGH PERFORMANCE 2m/440 VERTICALS		
ARX-270N 2m/440 9/12 db fg type N ant	$273.00	209.95
ARX-270U 2m/440 9/12 db fg SO-239 ant	273.00	209.95
FM 4-POLES (less vertical support mast)		
AFM-4DA 2m FM, 23' high, 6/9 db	$148.00	119.95
AFM-24DA 220 MHz FM, 15' high, 6/9 db	131.00	99.95
AFM-44DA 440 MHz FM, 8' high, 6/9 db	114.00	89.95
TWIST, OSCAR BEAMS (Horiz/Vert Polarization)		
A148-20T 2m 20el 10.8'bm 11.1db twist	$126.00	99.95
22XB 2m 22el 19.3' bm 14db circ beam/relay	290.00	199.95
719B 432 19 el beam	142.00	119.95
729B 432 29 el beam	220.00	189.95
738XB 432 38el 14.3'bm 15.5db circ w/relay	268.00	189.95
PS-4 Remote polarity switch .....Dmf	150.00	89.95
PS-4A Remote polarity switch	150.00	119.95
A14T-MB Oscar mtg boom & bracket .....Dm	49.00	34.95
BOOMER ANTENNAS		
617-6B 6m Boomer, 6 el, 34' boom, 14 db	$423.00	299.95
124WB 2m Boomer, 4 el, 4' boom, 10.2 db	73.00	64.95
13B2 2m Boomer, 13 el, 15' boom, 15.8 db	142.00	119.95
17B2 2m Boomer, 17 el, 31' boom, 18 db	246.00	199.95
26B2 2 13B2s vertically stacked	406.00	299.95
220B 220 Boomer, 17 el, 19' boom, 17 db	192.00	149.95
224WB 220 Boomer, 4 el, 3' boom, 10.2db	67.00	59.95
225WB 220 wideband Boom, 15el, 10'bm, 15.5db	149.00	119.95
424B 432 Boomer, 24 el, 17.5' bm, 18db Dwv	161.00	129.95
BOOMER STACKING KITS*		
617-SK Harness, pwr divider for 2 617-6Bs	$160.00	119.95
22-SK Harness, power divider; 2 13B2s	98.00	79.95
22N-SK Harness, pwr divider; 2 17B2s	160.00	119.95

CUSHCRAFT - continued

	Reg	Sale
26B2-VPK Vertical polar kit; 2 13B2s	210.00	159.95
220-SK Harness, power divider for 2 220Bs	98.00	79.95
220-QK Quad stacking kit for 4 220Bs .....Df	390.00	89.95
PD-2 Power divider for 2 13B2s	48.00	44.95
PD-2N Power divider for 2 17B2s	91.00	79.95
PD-4 Power divider for 4 13B2s	61.00	54.95
PD-4N Power divider for 4 17B2s	113.00	89.95
PD-222 Power divider for 2 220 Boomers	48.00	44.95
PD-224 Power divider for 4 220 Boomers	61.00	54.95
*Prices are for stacking kits only		
VHF/UHF BEAMS (Horizontal polarization)		
A50-3S 6m, 3 el, 6' boom, 8 db, stainless hdwre	$110.00	89.95
A50-5S 6m, 5 el, 12' boom, 10 db, stainless hdwre	182.00	139.95
A50-6S 6m, 6 el, 20' boom, 11db, stainless hdwre	296.00	229.95
A144-7S 2m, 7 el, 8' boom, 10 db	60.00	54.95
A148-10S 2m, 10 el wideband beam	85.00	74.95
A430-11S 430 MHz, 11 el, 4' boom, 13 db	87.00	76.95
HORIZONTAL STACKING KITS* (Adds 3 db)		
A535-SK For 2 A50-3S/5S	$ 48.00	44.95
A561-SK For 2 A50-6S	63.00	54.95
A17-SK For 2 A144-7S, 79" spacing	48.00	44.95
A148-SK Harness only for 2 A148-10S	48.00	44.95
A41-SK For 2 A430-11S, 26" spacing	48.00	44.95
*Prices are for stacking kits only		
CUSHCRAFT/SIGNALS MOBILE ANTENNAS		
CS-28M 10m magnet mt antenna	$ 64.00	59.95
CS-50 6m ¾" hole mt 3 db antenna	55.00	49.95
CS-50M 6m magnet mt 3 db antenna	64.00	59.95
CS-50T 6m trunk lip mt 3 db antenna	64.00	59.95
CS-1147M 2m ¼ wave magnet mt antenna	42.00	39.95
CS-147 2m ¾" hole mt 3 db antenna	55.00	49.95
CS-147M 2m magnet mt 3 db antenna	64.00	59.95
CS-147T 2m trunk lip mt 3 db antenna	64.00	59.95
CS-147A 2m coil & whip only	43.00	36.95
CS-220 220 ¾" hole mt 3 db antenna	55.00	49.95
CS-220M 220 magnet mt 3 db antenna	64.00	59.95
CS-220T 220 trunk lip mt 3 db antenna	64.00	59.95
CS-1450M 440 ¼ wave magnet mt antenna	42.00	39.95
CS-450 440 ¾" hole mt 5 db antenna	55.00	49.95
CS-450M 440 magnet mt 5 db antenna	64.00	59.95
CS-450T 440 trunk lip mt 5 db antenna	64.00	59.95
CS-450A 440 coil & whip only	43.00	36.95
CS-270M 2m/440 3.7/6 db magnet mt ant	87.00	72.95
CS-270A 2m/440 coil & whip only	58.00	49.95
MOUNTS ONLY FOR ABOVE MOBILE ANTENNAS		
CS-MG Magnetic mount	$ 29.00	
CS-TL Trunk lip mount	29.00	
PORTABLE ANTENNAS FOR KENWOOD		
TK-220B 220 6" TK duck for Kenwood .....Dm	$ 17.00	2.95
TK-440B 440 6" TK duck for Kenwood .....Dm	17.00	2.95
SKYWALKER HF BEAMS		
40-2CD 40m, 2 el, 23' boom, 5.5 db	$626.00	429.95
20-4CD 20m, 4 el, 32' boom, 10 db	626.00	429.95
20-3CD 20m, 3 el, 20' boom, 8 db	438.00	319.95
15-4CD 15m, 4 el, 20' boom, 10 db	354.00	249.95
15-3CD 15m, 3 el, 14' boom, 8 db	305.00	219.95
10-4CD 10m, 4 el, 16' boom, 10 db	299.00	214.95
10-3CD 10m, 3 el, 10' boom, 8 db	232.00	169.95
TEN-3 10m, 3 el, 8' boom, 8 db	150.00	119.95
MULTIBAND VERTICAL ANTENNAS		
AV-80 75/80m 36' vertical antenna	$444.00	329.95
AV-5 80/40/20/15/10m 25' vertical	218.00	169.95
AV-3 20/15/10m 14' vertical	122.00	99.95

CUSHCRAFT - continued

	Reg	Sale
AP-8A 80-10m 8-band ruggedized vertical	289.00	219.95
APR-18A Radial kit	68.00	64.95
R-5 20/17/15/12/10m half wave vert	382.00	279.95
R-7 40/30/20/17/15/12/10m vertical	510.00	379.95
ROTATABLE DIPOLES		
D-3 20/15/10m World Ranger dipole	$244.00	179.95
D-3W 30/17/12m rotatable dipole	249.00	189.95
D-4 40/20/15/10m World Ranger dipole	331.00	249.95
D-40 40m World Ranger dipole	296.00	219.95
MULTIBAND BEAM ANTENNAS		
A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwre	$497.00	329.95
A-3SDX Dlx 20/15/10m, 3el, stainless hdwre	550.00	389.95
A-743 40m or 10 MHz add-on kit; A-3/A-3S	155.00	129.95
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	597.00	419.95
A-744 40m or 10 MHz add-on kit; A-4/A-4S	155.00	129.95
A-3WS 17 & 12m, 3 el, 14' boom, 8 db	390.00	279.95
A-103 30m add-on kit for A-3WS	155.00	129.95
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP	828.00	569.95
AFB-2 160-10m 9-band balun	60.00	49.95
LIGHTNING ARRESTORS		
LAC-1 SO-239/PL-259 coax arrestor	$ 13.00	
LAC-2 SO-239/SO-239 coax arrestor	13.00	
LAC-4 200w SO-239 gas tube arrestor	43.00	39.95
LAC-4H 2kw SO-239 gas tube arrestor	47.00	42.95
LAC-4N 200w type N gas tube arrestor	55.00	49.95
LAC-4NH 2kw type N gas tube arrestor	57.00	52.95
LC-2 Extra 200w cartridge for LAC-4/4N	18.00	
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	20.00	
5VB Vinyl connector boots .....pack of 5	13.00	

DCI (DCI)

146-4H 2m 200w bandpass filter	$ 89.00	
445-10C 440 200w bandpass filter	109.00	

DC SALES (DCS)

Tenna Hitch Antenna mount for trailer hitch	$ 32.95	

DRSI (DRS)

Radio cable .....Dmfv	$ 9.95	4.95
RS-232 cable .....Dmwfv	12.95	6.95

DAIWA (DAI)

CS-201 2-position 600 MHz coax switch	$ 29.95	
CS-401 4-position 800 MHz coax switch	139.95	119.95
CN-101 1.8-150MHz SWR/power meter/light	119.95	89.95
CN-103M 140-525MHz SWR/power meter	129.95	99.95
CN-410M 3.5-150MHz 15/150w mob meter	119.95	89.95
CN-460M 140-450MHz 15/150w mob meter	119.95	89.95
CN-465M 140-450MHz 15/75w mobile meter	119.95	89.95
DP-810 1.8-150MHz digital SWR/power	269.95	229.95
DP-820 140-525MHz dig SWR/power meter	315.95	249.95
DP-830 1.8-150/140-525 digital SWR/power	401.95	319.95
NS-660PA 1.8-150 30/300/3kw PEP SWR/pwr	249.95	199.95

DAVIS (DAV)

7400 Perception II indoor WX unit	$150.00	129.95
7415 Wizard II-S weather station	150.00	129.95
7425 Wizard III weather station	195.00	169.95
7440 Monitor II weather station	395.00	349.95
7852 Rain Collector II, 0.01"	75.00	69.95
7859 External temp/humd Sensor II; 7440	125.00	109.95
7862 Weatherlink IBM interface/software	165.00	139.95
7866 Weatherlink Mac interface/software	165.00	139.95
7867 Weatherlink IBM conversion kit	40.00	
7868 Weatherlink Mac conversion kit	40.00	
7870 Modem adapter for 7862/7866	6.00	

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DAVIS - continued

	Reg	Sale
7873 Cig lighter power cord	9.00	
7876 4-conductor 40' extension cable	18.00	
7878 6-conductor 40' extension cable	22.00	
7880 8-conductor 25' junction box cable	15.00	
7881 8-conductor 50' junction box cable	25.00	
7882 8-conductor 100' junction box cable	45.00	
7890 Mast mount for anemometer	16.00	
7520 Stand alone 0.01" rain gauge/elec ctr	95.00	89.95

DIAMOND (DIA)

SWR/POWER METERS

SX-100 1.6-60 MHz 30/300/3kw PEP meter	$159.95	149.95
SX-200 1.8-200 MHz 5/20/200w PEP meter	119.95	109.95
SX-400 140-525 MHz 5/20/200w PEP meter	139.95	129.95
SX-600 Dual band 1.8-160/140-525 200w PEP meter	199.95	179.95
SX-1000 1.8-160/430-1300MHz 200w PEP meter	269.95	249.95

HT & HANDHELD SCANNER ANTENNAS

RH-3 2m/440 1.75" BNC mini HT duck	$34.95	
RH-77CA 2m/440 15" BNC rubber gain ant	34.95	
RH-205 2m ⅝ wave telescopic HT antenna	27.95	
RH-951 2m/440/1.2GHz 15" BNC rubber ant	57.95	

MONO-BAND MOBILE ANTENNAS

NR-124 1.2GHz 8.4db 25" type N mobile ant	$66.95	
NR-140A 220 4db 37" mobile antenna	60.95	
SG-2000A 2m 5.2db 62" mobile antenna	89.95	
SG-6000NMO 6m 2.15db 39" NMO mobile	84.95	

DUAL-BAND MOBILE ANTENNAS

CR-214S 2m/220 2.1/3.4db 37" mobile ant	$62.95	
CR-224A 2m/220 5/6db 69" mobile antenna	109.95	99.95
NR-72BNMO Black 2m/440 2.15db 14" NMO	46.95	
NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	62.95	
NR-770HA 2m/440 3/5.5db 40" mobile ant	62.95	
NR-770HB Black 2m/440 3/5.5db 40" mobile	64.95	
NR-770HBNMO Blk 2m/440 3/5.5db 40" NMO	66.95	
NR-770HNMO 2m/440 3/5.5db 40" NMO mobile	64.95	
NR-770RA 2m/440 3/5.5db 39" mobile ant	62.95	
NR-770SA 2m/440 2.15db 16.5" mobile ant	41.95	
NR-790A 2m/440 4.5/7.2db 57" mobile ant	94.95	89.95
SG-7000A 2m/440 2.15/3.8db 19" mobile	73.95	
SG-7200NMO 2m/440 3.2/5.7db 38" NMO ant	88.95	
SG-7500A 2m/440 3.5/6db 41" mobile ant	86.95	
SG-7900A 2m/440 5/7.6db 62" mobile ant	124.95	114.95
TG-509 2m/440 2.1/5.5db 34" glass mt ant	199.95	179.95

TRI-BAND MOBILE ANTENNAS

CR-320A 2m/220/440 2.15/3.8/5.5db 36"	$98.95	93.95
CR-627B 6m/2m/440 2.15/4.5/7.2db 60" ant	109.95	99.95
NR-2000NA 2m/440/1.2 3/6/9.7db 39" N mob	92.95	89.95

MAGNET MOUNTS

DP-SPM/58U Mag mt w/RG-58U; 45" max	$43.95	
DPK-4NM-M Hvy mag mt, Yaesu N, 45" max	49.95	
DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max	49.95	
MCR-L Mag mt HT base/retractable cbl/BNC Dm	55.95	
MCR-M Mag mt HT base w/coax/tiltable BNC	44.95	
SPM-35 Hvy duty mag mt, cable, 45" max	44.95	

TRUNK LIP MOUNTING KITS

K-200 Folding hatch/tnk mt; NR/SG ants	$39.95	
K-200KM Folding hatch/tnk mt/coax; NR/SG	69.95	
K-400 Hatch/trunk mt; NR/SG antennas	39.95	
K-400-3/8C Trunk mount w/6' cable; ⅜-24	69.95	
C-110 10' extension cable for K-400-3/8C	14.95	
K-400M Hatch/trunk mt w/cable; NR/SG ants	79.95	
K-400NMO Dlx hatch/trunk mt w/cable; NMO	67.95	
K-600M Tilt angle trunk mt w/cable	69.95	
K-600N Tilt angle tnk mt w/type N, cable	74.95	

Same Day Shipping... Call Toll Free and use your Credit Card!

Hi! I'm Jim, WB9LSR... Ask about late breaking "Hot Deals", Latest Sale Prices, Monthly Specials, Coupons, etc.

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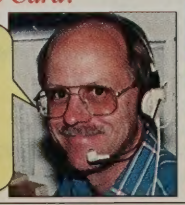

DIAMOND - continued

	Reg	Sale
K-600P Tilt angle trunk mt w/cable, Yaesu N	72.95	
K-601M SO-239 hideaway trunk mt, 6' coax	69.95	
K-601NMO NMO hideaway trunk mt, 6' coax	69.95	
C-110 10' extension cable for K-601 mts	14.95	

GUTTER MOUNTS & KITS

K-300 Folding gutter mt; NR/SG antennas	$39.95	
K-300KM Folding gutter mt w/coax; NR/SG	67.95	
K-300M Gutter mt w/cable; NR/SG ants	79.95	

MIRROR & LUGGAGE RACK MOUNTS & KITS

K-540 Mirror/luggage rack mount	$39.95	
K-540KM Mirror/luggage rack mt w/coax	67.95	
K-550 Luggage mt; new mini vans (use GLP)	49.95	
K-550KM Luggage mt w/SO-239 base/coax	69.95	

MOUNTING GROUP HARDWARE

C-101 SO-239 mt, 6.5' RG-316 low-loss coax	$29.95	
C-110 10' ext cable; C-101/K-601/K-400-3/8C	14.95	
C-211 SO-239 mt, 6.5' coax, 10' coax entend	39.95	
GLP-5 UHF base mtg group hrdwr; mini coax	10.95	
GLP-5N UHF mtg grp hrdwr; mini coax, Yae N	13.45	
GLP-58 UHF base mounting group hardware	10.45	
NMO-UHF Adapter to NMO; not for SG, 45" max	23.95	

MONO-BAND BASE STATION ANTENNAS

DP-GH62 6m 6db 21' base antenna	$157.95	147.95
F-22A 2m 6.7db 10.5' base antenna	114.95	104.95
F-22J 143.5-146.5MHz 6.7db 10.5' base ant	114.95	104.95
F-23A 2m 7.8db 15' base antenna	172.95	162.95
F-23C1 148-154MHz 7.8db 15' comm base	183.95	159.95
F-23J 143.5-146.5MHz 7.8db 15' base ant	172.95	162.95
F-142A 220 MHz 5.5db 6' base antenna	136.95	124.95
F-718A 440 11.5db 15' type N base antenna	246.95	226.95
F-718C2 460-472MHz 11.5db 15' N comm	261.95	239.95
F-718J 428-442MHz 11.5db 15' N base ant	246.95	226.95
F-718L 420-430MHz 11.5db ATV N base ant	246.95	219.95
F-1230A 1.2GHz 13.5db 10.5' type N base ant	178.95	164.95

DUAL-BAND BASE STATION ANTENNAS

U-200 440/1.2GHz 8.3/11.7db 6' N base ant	$141.95	129.95
U-300A 440/1.2GHz 8.6/13.2db 8.3' N base ant	178.95	159.95
X-50A 2m/440 4.5/7.2db 5.6' base antenna	125.95	115.95
X-200A 2m/440 6/8db 8.3' base antenna	167.95	157.95
X-300A 2m/440 6.5/9db 10.2' base ant	183.95	173.95
X-500HNA Hvy duty 2m/440 8.3/11.7db 17.8' N ant	269.95	249.95
X-510MA 2m/440 8.3/11.7db 17.2' base ant	219.95	199.95
X-510NA 2m/440 8.3/11.7db 17.2' type N ant	219.95	199.95
X-510NJ 143.5-146.5/428-442MHz 17.2' N	219.95	189.95
X-700HA 2m/440 9.3/13db 24' base ant	439.95	399.95
X-2200A 2m/220 6/7.8db 11.5' base ant	183.95	173.95

TRI-BAND BASE STATION ANTENNAS)

D-130J 25-1300 MHz 200w discone ant	$101.95	94.95
U-5000A 2m/440/1.2GHz 4.5/8.3/11.7db 6' N	167.95	157.95
V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3'	172.95	162.95
X-3200A 2m/220/440 6/7.8/8db 10' base	241.95	221.95
X-6000A 2m/440/1.2 6.5/9/10db 10.5' N	219.95	199.95
CP-4A 40/20/15/10m 11' 200w PEP vert .....Dm	259.95	129.95

DUPLEXERS & TRIPLEXERS

MX-37 HF-440/1.2 100/50w N duplexer	$74.95	
MX-37MB HF-440/1.2 100/50w SO-239 ...Dv	79.95	29.95
MX-37N HF-440/1.2 100/50w N dplxr .Dmwfv	60.95	
MX-72D HF-2m/440 400/150/100w duplexer	52.95	
MX-72DN As MX-72D, w/type N on 440	52.95	
MX-72H As MX-72D, w/12" cables	58.95	
MX-72J As MX-72D, all SO-239	58.95	
MX-72N As MX-72D, type N on 440, 12" cables	58.95	
MX-214 2m/220 150/100w w/12" cables	73.95	
MX-214D As MX-214, no cables	73.95	
MX-324 2m/220/440 triplexer	99.95	94.95
MX-324D As MX-324, no cables	99.95	94.95
MX-2000 HF-6m/2m/440 400/400/250w triplexer	94.95	89.95
MX-2000D As MX-2000, no cables	99.95	94.95
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	94.95	89.95
MX-3000D As MX-3000, no cables	89.95	
MX-3000DN As MX-3000, type N on 440, 1.2	89.95	
MX-3000N As MX-3000, type N, 12" cables	94.95	89.95

ACCESSORIES

CA-23R DC-1GHz 200w N lightning protect . Dmw	$39.95	24.95
CA-35R DC-500MHz 400w lightning protect	36.95	
CX-210A 1.5kw DC-1000MHz coax switch	51.95	
CX-210N 1.5kw DC-1500MHz N coax switch	93.95	

DIAMOND - continued

	Reg	Sale
DL-30N 15/100w peak 0-500MHz N dummy Dw	49.95	44.95
HB-100 Desk mount bracket for HT	44.95	
HB-400 HT air vent dash mount	19.95	
HB-450 HT adjustable air vent dash mount	69.95	
HB-500 Remote head air vent dash mount	22.95	
HB-650 HT door mt; side window/glove box	69.95	
SM-505KTS Spkr/mic Kenwood TR-2500 ..Dm	29.95	

Diamond Systems (DSY)

IBM LICENSE COURSE; THEORY/REGULATIONS/CODE

DSI-IBM-N Novice Class License software	$49.95	39.95
DSI-IBM-T Technician Class License software	44.95	34.95
DSI-IBM-NC No Code Tech Class License software	59.95	49.95
DSI-IBM-G General Class License software	44.95	34.95
DSI-IBM-A Advanced Class License software	59.95	49.95
DSI-IBM-E Extra Class License software	59.95	49.95

DIGIMAX (DIG)

D-500 512 MHz 8-digit counter - 1 PPM	$149.95	139.95
D-510A 1 GHz 8-digit counter - 1 PPM	179.95	159.95
D-612 1.2 GHz 9-digit counter - .1 PPM	259.95	229.95
D-1200 1.2 GHz 9-dig .1 PPM ctr/audio mult	299.95	269.95
AC-12 9vdc adaptor	8.95	
AM-12 10X/100X audio multiplier .....Δmwfv	39.95	14.95
AM-500X X10/X100 audio multiplier .....Δm	69.95	19.95
B-12 Dry cell holder, switch for D-612	10.95	
BAC-5 Nicad batt pack for D-500/D-510A	29.95	
BAC-12 Nicad batt pack; D-612/D-1200	34.95	
RF-500X Inline RF sampler, 250w maximum	39.95	
T-1200 21" BNC telescopic antenna	8.95	

DRAKE (DRA)

R-8 1290 Shortwave receiver .....Dwv	$999.00	899.95
R-8A Shortwave receiver	1099.00	1079
1590 35-55, 108-174 MHz VHF converter	209.00	
1591 Interface software for computers	59.00	
MS-8 1592 Speaker	49.00	
7850 R-8 technical manual	39.95	
SW-8 Shortwave receiver	699.00	

EDCO (EDC)

TX-146 2m 50w 40db 3-stage helical filt Dmfv	$89.95

EIMAC TRANSMITTING TUBES (EIM)

3-500Z	$183.00
3CX800A7	412.00
3CX1200A7	665.00
4CX250B/7203	131.00
8873	458.00
8874/3CX400A7	439.95
8875	499.00
8877/3CX1500A7	935.00

Also see TUBES

FORBES GROUP (FOR)

VT-14 2m Ventenna 3' 2.6 db base ant	$49.95	44.95
VT-22 220 Ventenna 25" 2.6 db base ant	49.95	44.95
VT-27 2m/440 Ventenna base antenna	74.95	66.95
VT-44 440 Ventenna 14" 2.6 db base ant	49.95	44.95
VT-15S Scanner Ventenna 3' 2.6 db base	49.95	44.95
VT-SWL SWL Ventenna 3' 20db active rcv Δmv	129.95	89.95

Gamber-Johnson (GAM)

SS-100 Super slide mount w/ant plug	$77.91	59.95
SS-101 Extra base for SS-100	36.58	

GAP Verticals (GAP)

DX-VIII Challenger 80/40/20/15/12/10/6/2m 31.5'	$259.00
(SYN) 100' 3/32" black double braided rope	6.95
DX-VI Eagle 40/20/17/15/12/10m 21.5' rigid	269.00
DX-IV Voyager 160/80/40/20m 45'; use 350' guy	399.00
(SYN) 350' 3/16" black double braided rope	39.95
Titan DX 80/40/30/20/17/15/12/10m, 25'	289.00

GENESYS (GEN)

ADP-1 Chrome NMO to SO-239 adapter	$17.95
B-27 2m/440 7" duck	19.95
B-35 2m/440 15" duck	27.95
CT-221E Eartalk mic/amp/gain controls ..Dmf	84.95
CT-221KE Eartalk for Kenwood	84.95
CT-221ME Eartalk w/split plugs	84.95

GENESYS - continued

	Reg	Sale
NMO Mount NMO mount w/16' mount	10.95	
PO Mount SO-239 mount w/16' coax	17.95	
QS-110 Speaker/mic for Alinco, Icom, Yaesu	29.95	
QS-110K Speaker/mic for Kenwood	29.95	
SY-25D VHF/UHF duplexer	34.95	
T-05 Throat mic with split plugs	84.95	
T-05K Throat mic for Kenwood	84.95	
T-05M Throat mic for Motorola	92.95	

GLEN MARTIN (GME)

RT-424 4.5' roof-top tower, 6 sq ft 85 mph	$149.95	
RT-832 8' roof-top tower, 8 sq ft 85 mph	219.95	
RT-936 9' roof-top tower, 18 sq ft 85 mph	369.95	
RT-1832 17.5' roof-top tower, 12 sq ft 85 mph	499.95	
LB-3755 Set of 8 ⅜ x 5" lag bolts	8.95	
RA-6024 24" side arm for roof tower	59.50	
RA-6048 48" side arm for roof tower	76.50	
M-1330A 30' alum twr 12 sq ft/Hazer/10' mast T	1539.56	
M-1340A 40' alum twr 12 sq ft/Hazer/10' mast T	1744.56	
M-1350A 50' alum twr 12 sq ft/Hazer/10' mast T	1971.06	
M-1840A 40' alum twr 16 sq ft/Hazer/10' mast T	2047.64	
M-1850A 50' alum twr 16 sq ft/Hazer/10' mast T	2292.64	
M-1860A 60' alum twr 15 sq ft/Hazer/10' mast T	3195.00	
M-1870A 70' alum twr 15 sq ft/Hazer/10' mast T	3485.00	
LR-8400 Lightning rod kit (complete)	148.95	
CW-2540 25' #4 bare copper ground wire	18.25	
CW-5040 50' #4 bare copper ground wire	36.50	
CW-7540 75' #4 bare copper ground wire	55.00	
CW-1040 100' #4 bare copper ground wire	73.00	
CW-1240 125' #4 bare copper ground wire	91.25	
CW-1540 150' #4 bare copper ground wire	109.50	
MC-10 Mast clamp; 2 required	24.95	
ES-40 4" dia x 30" earth screw	13.95	
ES-60 6" dia x 48" earth screw	23.95	
ES-80 8" dia x 66" earth screw	54.00	
GR-4400 Ground rod wire clamp	4.85	
GR-5080 8' x ⅝" ground rod	19.00	
H-2 175 lb load 12 sq ft HD aluminum Hazer	339.95	
H-3 150 lb load 8 sq ft std aluminum Hazer	245.95	
H-4 200 lb load 16 sq ft galv steel Hazer	326.95	
HR-6010 T²X plates for H-2/4/5/6	19.95	
M-1049 9' 1.92" OD galv steel mast	56.00	
MA-1049 9' 1.92" OD aluminum mast	64.95	
MA-1050 5' 1.92" OD aluminum mast	51.50	
MA-2069 9' 2.376" OD aluminum mast	96.00	
MA-5050 5' 1.33" OD aluminum mast	34.95	
ML-1800 Messenger line kit; Glen Martin towers	65.50	
ML-2500 Messenger line kit; Rohn towers	65.50	
TB-25 Thrust bearing (2 sealed bearings)	79.95	
TL-0470 Terminal lug	1.65	
VH8-50 Hazer - 50' Rohn 45	1230.00	
VH8-60 Hazer - 60' Rohn 45	1350.00	
VH8-70 Hazer - 70' Rohn 45	1455.00	
VH9-50 Hazer - 50' Rohn 55	1265.00	
VH9-60 Hazer - 60' Rohn 55	1385.00	
VH9-70 Hazer - 70' Rohn 55	1490.00	

All GLEN MARTIN items are shipped PREPAID (Glen Martin's expense) direct to you from the factory (48 states). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload towers, so please be sure to have enough manpower and/or equipment on hand.

GOLD LINE (GOL)

1043 Signal Hunter 10m DF ant	Δmw	$ 55.00	29.95

GROVE (GRV)

ANT-20 No-Tenna Inside car receiving ant	$ 19.95	
BOK-16 Listener's Lawbook	9.95	
BOK-104 Antenna Factbook	9.95	
SP-200A Sound Enhancer Deluxe speaker	279.95	

GRUNDIG (GRU)

Cosmopolit Port AM/FM/SW/LW Rcvr	Dfv	$249.95	149.95
Yacht Boy 206 Port AM/FM/SW/LW Rcvr	Dmwv	139.95	79.95
Yacht Boy 220 Port AM/FM/SW/LW Rcvr	Dmv	129.95	59.95
Yacht Boy 230 Port AM/FM/SW/LW Rcvr	Dm	199.95	89.95
Yacht Boy 235 Port AM/FM/SW/LW Rcvr	Dmfv	159.95	99.95
Satellit 700 AC/DC/batt AM/FM/SW/LW Rcvr		699.95	449.95

GRUNDIG - continued

		Reg	Sale
Traveller II Port AM/FM/SW/LW Rcvr/clock		109.95	99.95
Yacht Boy 305 Portable AM/FM/SW/LW Rcvr		149.95	129.95
Yacht Boy 400 Portable AM/FM/SW/LW Rcvr		249.95	199.95

HAL (HAL)

P-38 HF DSP modem	m	$395.00	
PCI-4000/M Multi-mode clover unit; IBM	m	795.00	699.95
ST-8000 HF modem	m	3495.00	3269

HEIL (HEI)

PRO-SET-4 Deluxe boom mic/headset/HC-4		$131.00	
PRO-SET-5 Deluxe boom mic/headset/HC-5		131.00	
PRO-MICRO-4 Boom mic/headset/HC-4		105.00	
PRO-MICRO-5 Boom mic/headset/HC-5		105.00	
PRO-5-4 Boom mic/single headset (HC-4)		120.00	
PRO-5-5 Boom mic/single headset (HC-5)		120.00	
AD-1-I Pro-Set adapter cord for Icom		14.99	
AD-1-K Pro-Set adapter cord for Kenwood		14.99	
AD-1-Y Pro-Set adapter cord for Yaesu		14.99	
BM-5-4 Boom mic/single headset (HC-4)	Dmwfv	64.90	
BM-5-5 Boom mic/single headset (HC-5)	Dwfv	64.90	
BM-5-4-I Bm mic/sgl headset; Icom (HC-4)	Dmwfv	69.90	
BM-5-4-K Bm mic/sgl headset; Ken (HC-4)	Dmwv	69.90	
BM-5-4-Y Bm mic/sgl headset; Yaesu (HC-4)	Dmv	69.90	
BM-5-5-I Bm mic/single headset; Icom (HC-5)	Dwfv	69.90	
BM-5-5-K Bm mic/single headset; Ken (HC-5)	Dmwv	69.90	
BM-5-5-Y Bm mic/sgl headset; Yaesu (HC-5)	Dwv	69.90	
BM-10-4 Boom mic/headset (HC-4)	Dv	71.90	
BM-10-5 Boom mic/headset (HC-5)	Dmwfv	71.90	
BM-10-4-I Boom mic/headset; Icom (HC-4)	Dwfv	85.90	
BM-10-4-K Boom mic/headset; Ken (HC-4)	Dmv	85.90	
BM-10-4-Y Boom mic/headset; Yaesu (HC-4)	Dw	85.90	
BM-10-5-I Boom mic/headset; Icom (HC-5)	Dwv	85.90	
BM-10-5-K Boom mic/headset; Ken (HC-5)	Dwf	85.90	
BM-10-5-Y Bm mic/headset; Yaesu (HC-5)	Dmwfv	85.90	
FS-1 Foot switch		26.95	
HS-1 Hand switch		20.75	
HC-4 DX'ers 'dream machine' mic element		29.95	
HC-5 Mic element for Icom SM-5/SM-6		29.95	
HM-10-4 Microphone with HC-4 element		63.96	
HM-10-5 Microphone with HC-5 element		63.96	
HM-10-Dual Mic w/HC-4 & HC-5 elements		112.96	
CC-1-I HM-10 cable for Icom		25.99	
CC-1-K HM-10 cable for Kenwood		25.99	
CC-1-Y HM-10 cable for Yaesu		25.99	
MA-1 Clamp and arm for HM-10		49.99	
TB-1 Table base mic stand for HM-10		19.95	
B-4 Microphone boom (HC-4)	Df	41.90	19.95
B-5 Microphone boom (HC-5)	Dm	41.90	19.95
B-4-I Microphone boom; Icom (HC-4)	Dwf	47.90	24.95
B-4-K Mic boom; Kenwood (HC-4)	Dmwf	47.90	24.95
B-4-Y Microphone boom; Yaesu (HC-4)	Dmwf	47.90	24.95
B-5-I Microphone boom; Icom (HC-5)	Dmwf	47.90	24.95
B-5-K Mic boom; Kenwood (HC-5)	Dmwf	47.90	24.95
B-5-Y Microphone boom; Yaesu (HC-5)	Dmwf	47.90	24.95
FL-2 Flexlite	Dm	32.50	14.95
Ear Pads for BM-series	pair	5.00	
Boom Clip for BM-series		5.00	

HUSTLER (HUS)

RM-80 80m CW 400w PEP resonator	$ 26.95	
RM-75 75m phone 400w PEP resonator	26.95	
RM-40 40m 400w PEP resonator	24.95	
RM-30 30m 400w PEP resonator	24.95	
RM-20 20m 400w PEP resonator	21.95	
RM-17 17m 400w PEP resonator	21.95	
RM-15 15m 400w PEP resonator	15.95	
RM-12 12m 400w PEP resonator	15.95	
RM-11 11m 400w PEP resonator	15.95	
RM-10 10m 400w PEP resonator	15.95	
RMX-B Black 10m resonator w/mast ...Dmwv	34.95	29.95
RMX-W White 10m resonator w/mast .Dmwfv	34.95	24.95
RM-80S 80m CW 2kw PEP resonator	49.95	
RM-75S 75m phone 2kw PEP resonator	49.95	
RM-40S 40m 2kw PEP resonator	35.95	
RM-20S 20m 2kw PEP resonator	28.95	
RM-15S 15m 2kw PEP resonator	24.95	
RM-11S 11m 2kw PEP resonator	23.95	
RM-10S 10m 2kw PEP resonator	23.95	

HUSTLER - continued

	Reg	Sale
MO-1 54" mast for fender or deck mount	31.95	
MO-2 54" mast for bumper mount	31.95	
MO-3 54" no break-over mast	23.95	
MO-4 22" mast for special applications	19.95	
VP-1 Tri-band adapter	5.95	
RSS-2 Resonator spring	9.95	
QD-2 Stainless quick disconnect	19.95	
L-14-144 12' RG-58, PL-259 to lugs	9.95	
L-14-240 20' RG-58, PL-259 to lugs	12.95	
LU-216 18' RG-58, PL-259s both ends ..Dmfv	13.95	9.95

STAINLESS 2" MOBILE BALL MOUNTS

SSM-1 Ball & spring, cadmium hardware	$ 46.95	
SSM-2 Ball, cadmium hardware	26.95	
SSM-3 Stainless steel spring	24.95	

1-1/2" MOBILE BALL MOUNTS

C-32 Chrome plated ball	$ 11.95	
C-30 Chrome plated spring	11.95	
C-29 Stainless steel spring	17.95	
BM-1 Single strap bumper mt w/C-32	21.95	

3/8-24 THREAD MOBILE MOUNTS

GCM-1 Rain gutter mount	Δf	$ 12.95	9.95
HLM Trunk lip mount w/swivel		22.95	
HOT Hustloff trunk lip mt w/swivel		23.95	
MBM Super magnet mount w/16' coax		19.95	
MM-3 Universal mount with 17' coax		21.95	
RVM Recreational vehicle mount		20.95	
TGM-1 Trunk grove mount		12.95	
TLM Trunk lip mount		21.95	

HF ANTENNAS

4-BTV 40/20/15/10m 21' trap vertical		$166.95	119.95
5-BTV 80/40/20/15/10m 25' trap vertical		211.95	149.95
30-MTK 30m trap kit for 4-BTV/5-BTV		41.95	39.95
6-BTV 80/40/30/20/15/10m 24' trap vert		246.95	169.95
G-2537 10m 4.2db vertical antenna	Dmw	134.00	89.95

VHF BASE STATION ANTENNAS

G6-144B 2m 6 db 10' vertical antenna		$149.95	114.95
G6-270R 2m/440 6db 7.6' base station ant		208.95	159.95
G7-144 2m 7 db 15' vertical antenna		208.95	159.95
G7-220 220 MHz 7 db 10' vertical antenna		199.95	149.95
G6-440 440 MHz 6 db 7' vertical antenna		186.95	139.95

SPIRIT VHF/UHF BASE ANTENNAS (Special Order)

HSU-14448 2m unity gain base antenna	*T	$400.00	219.95
HS3-14448 2m 3db base antenna	*T†m	495.00	269.95
HD6-14448 2m 6db base antenna	*T	833.00	629.95
HS6-43050 430-450MHz 6 db base ant	*T	697.00	379.95
HS9-43050 430-450MHz 9 db base ant	*T	766.00	419.95
HS6-12430 1.2GHz 6 db base antenna	*T	485.00	319.95
HS9-12430 1.2GHz 9 db base antenna	*T	766.00	419.95
HS12-12430 1.2GHz 12 db base antenna	*T	965.00	529.95

***Specify exact frequency and height above ground that the Spirit antenna will be mounted above surrounding terrain. These antennas are drop-shipped (shipped direct to you from the Hustler factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mineral Wells, Texas via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.**

VHF MOBILE ANTENNAS

BBL-144A 2m FM ¾" hole mt antenna, 3.4db	$ 39.95	
BBLT-144A 2m FM trunk lip mt ant, 3.4 db	47.95	42.95
CG-144 2m FM ⅜-24 ant, 7' high, 5.2 db	31.95	
CGT-144 2m FM trunk mt ant, 7' high, 5.2db	51.95	49.95
CG-220 220 FM ⅜-24 antenna, 5.2 db	31.95	
CGT-220 220 MHz 5.2 db trunk mt antenna	51.95	44.95
FX-2 2m FM 3.4 db magnetic mt antenna	33.95	
FX-2B 2m FM 3.4 db black mag mt antenna	38.95	
FX-220 220 FM 3.4 db magnetic mt ant	33.95	

Apply for your AES® CREDIT CARD
Application on p. 156

HUSTLER - continued

	Reg	Sale
FX-220B 220 FM 3.4 db black mag mt ant	38.95	
FXM FX-style magnet mount w/coax .....Dwfv	19.95	
MKR-2 Radial kit for SF-2/CG-144	20.95	
RX-2 2m FM 3.4db magnetic mount ant	24.95	
RX-220 220 FM 3.4db magnetic mt antenna .	24.95	
RX-440 440 FM 5 db magnetic mt antenna ...	24.95	
SF-2 2m FM ⅜-24 ant, 4' high, 3.4 db	14.95	
SF-220 220 MHz ⅜-24 antenna, 3 db	14.95	
THF 140-500 MHz ¼ wave trunk mount ant ...	23.95	
UGM 140-500 MHz ¼ wave BNC mag mt ant .	21.95	
UHT-1 140-500 MHz ¼ wave roof mt ant	14.95	

HY-GAIN (HYG)

TRI-BAND BEAMS (20-15-10m)

	Reg	Sale
398S TH11DXS 11el 20/17/15/12/10m, 24' bm .	1026.95	859.95
391S TH7DXS 7 el, 24' boom w/balun	755.95	639.95
393S TH5Mk2S 5 el, 19' boom w/balun	648.95	549.95
395S Explorer 14 4 el, 14' boom w/balun	499.95	429.95
396S QK-710 10MHz or 40m EX add-on	158.95	149.95
388S TH3Mk4 3 el, 14' boom	380.95	329.95
221S-1 TH3JRS 3 el, 12' boom, 750w PEP	316.95	269.95
390S TH2Mk3S 2 el, 6' boom	320.95	269.95
RTP-1* Roof ant pack; TH3JR/CD45/4.5' twr/cbl	799.95	779.95
*Drop-shipped from Hy-Gain, freight collect		

MONOBAND BEAMS

	Reg	Sale
371S Discoverer 7-1 30m or 40m rotatable dipole	$250.95	229.95
372S Discoverer 7-2 40m 2 el 23' boom	560.95	474.95
373S Discoverer 7-3 3rd el; 372S; 35' boom	353.95	299.95
377S-1 205CA 20m 5 el, 34' boom .....T	628.95	529.95
394S 204BAS 20m 4 el, 26' boom	457.95	389.95
226S 203BAS 20m 3 el, 16' boom	274.95	239.95
376S 155B/CAS 15m 5 el, 26' boom	354.95	299.95
236S 153BAS 15m 3 el, 12' boom	169.95	149.95
375S 105B/CAS 10m 5 el, 24' boom	233.95	209.95
239S-1 103BAS 10m 3 el, 8' boom	122.95	109.95
1009AA LP-1009AA 13-30 MHz 12 el LP ...m	1231.95	1029
1010AA LP-1010AA 10-30 MHz 14 el LP ...m	1778.95	1489

MULTI-BAND VERTICALS

	Reg	Sale
188S DX-88 80-10m 8-band 25' vert	$322.95	279.95
189S GRK-88 Ground radial kit	64.95	59.95
190S RRK-88 Roof radial kit	82.95	74.95
191S 160MK-88 160m kit for 188S	169.95	149.95
DX-77 40-10m 750w 7-band 29' no radials vert	419.95	329.95
182S 18HTS Hy-Tower 5-band, 50' high .....T	699.95	599.95
LC-160Q 160m loading coil for Hy-Tower	87.77	79.95
385S 14AVQ/WBS 40/20/15/10m, 18'	152.95	139.95
384S 12AVQS 20/15/10m, 13.5' high	104.95	94.95
184 14RMQ Roof kit-12/14AVQ/S, 18AVT/S ...	63.95	59.95
193S 18VS 80-10m trapless vert, 18' high ...	52.95	49.95

MULTI-BAND DOUBLETS

	Reg	Sale
380S 2BDQS 80/40m 101' trap doublet	$111.95	99.95
383S 5BDQS 80/40/20/15/10m 94' trapt	224.95	189.95
381S 19PD 80-10m 233' 1-band port dipole	225.95	199.95

VHF/UHF BASE STATION ANTENNAS

	Reg	Sale
343S 66DX 6m 6 el beam, 24' boom	$215.95	189.95
230S-1 64DX 6m 4 el beam, 12' boom	114.95	104.95
232S 215DX 2m 15 el beam, 28' boom	195.95	174.95
214S-1 214FM 2m 14 el beam, 15' boom	68.95	
208S-1 28FM 2m 8 el beam, 12' boom	59.95	
205S-1 25FM 2m 5 el beam, 6' boom	44.95	
203S-1 23FM 2m 3 el beam, 3.5' boom	34.95	
231S 70-31DX 430 31 el beam, 24' boom	189.95	169.95
338 GPG2B 2m ground plane ant	39.95	
331S V-42R 2m/440 type N base ant	147.95	134.95
335S-1 V-2R 2m ground plane ant	96.95	89.95
337S-1 V-4R 440 ground plane ant	92.95	84.95

OSCAR LINK ANTENNAS

	Reg	Sale
216S 216SAT 2m 16el 145.9MHz boom	$192.95	179.95

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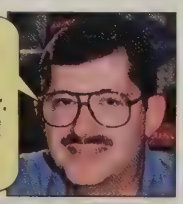

HY-GAIN - continued

	Reg	Sale
215S 7030SAT 435 MHz 30 el beam	185.95	169.95
217 60" x 1½" fiberglass crossboom	67.95	
218S OSCAR Link Complete Oscar ant sys	431.95	369.95

ACCESSORIES

	Reg	Sale
155 CI Center insulator for doublets	$ 12.95	
156 EI 7" doublet end insulators .....pair	6.95	
157S CIC Dipole center insulator w/SO-239 .	21.95	
242S BN-86 80-10m balun	34.95	
243S BN-4000B 4kw PEP 160-10m beam balun ..	87.95	82.95
244S BN-4000D 4kw PEP 160-10m dipole balun ..	87.95	82.95
245S BN-4000N 4kw PEP 80-10m N beam balun	98.95	89.95
2400-155 62400155 Contester bm mic/headset	83.95	79.95

HY-GAIN CRANK-UP TOWERS

	Reg	Sale
129 HG-37SS 37' self-supporting tower .....T	1450.95	1199
125-1 HG-52SS 52' self-supporting tower ..T	2439.95	1999
130-1 HG-54HD 54' hvy duty self-support ..T	2955.95	2429
131-1 HG-70HD 70' hvy duty self-support ..T	4261.95	3499
116 HG-5 5' 2" OD .120 wall steel mast	75.95	
117 HG-10 10' 2" OD .120 wall steel mast Tw	97.95	59.95
118 HG-15 15' 2" OD .120 wall steel mast .T	156.95	149.95
121B HG-TBT Thrust bearing w/sleeve	82.95	74.95
122 HG-COA Coax arm*, tower legs 1"-1½" ..	21.95	
*One required per section		
140 HG-TOA Tilt-over 'gin-pole' .....T	691.95	589.95

Hy-Gain Crank-Up Towers are shipped PREPAID (Hy-Gain's expense) via truck direct from the factory (48 states). Any other Hy-Gain antennas, rotors, or accessories on the same order as a Hy-Gain tower will also be shipped PREPAID from the factory. On these drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise. This means at you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload the tower, so please be sure to have enough manpower and/or equipment on hand.

HY-GAIN ANTENNA ROTORS

	Reg	Sale
305 AR-40 Solid state light duty rotor	$219.95	199.95
302 CD-45-II Medium duty rotor	307.95	279.95
304 HAM IV Heavy duty rotor	435.95	379.95
304D Pathfinder HAM IV digl HD rotor .Dmwfv	749.99	599.95
307 Pathfinder HAM V digital HD rotor	749.95	639.95
303 T²X Tailtwister extra heavy duty rotor	519.95	449.95
303D Pathfinder Tailtwister dig extra HD rotor	799.95	689.95
300 HDR-300/A Deluxe digital hvy duty rotor	1138.95	949.95
306 Digital rotor control for HAM IV/T²X	519.95	439.95

OPTIONAL ACCESSORIES FOR ROTORS

	Reg	Sale
51467-10 MSHD Lwr mast support; HAM IV/T²X	$ 75.95	
51472-10 MSLD Lwr mast support; CD45II/AR40	23.95	
50559-10 TSP-1 Tower spacing kit	21.95	

See BELDEN for rotor cable

ICOM (ICO)

$5/10/15 coupon - Icom Accessories thru 12/31/95
Call for Details!

	Reg	Sale
IC-781 Xcv/Rcv/ps/auto tuner/spec scope	8000.00	CALL
FL-103 2.8 KHz SSB filter	98.00	
UT-36 Voice synthesizer	59.00	
IC-775DSP Xcvr/ps/keyer/auto tuner/IF-DSP .	4760.00	CALL
IC-775DSP/ICO Xcv/ps/kyr/tune/IF-DSP installed	4760.00	CALL
CR-282 High stability crystal unit	134.00	124.95
FL-53A 250 Hz CW filter (2nd IF)	196.00	179.95
FL-101 250 Hz CW filter (1st IF)	106.00	99.95
FL-102 6 KHz AM filter	75.00	
FL-222 1.9 KHz 455 KHz IF SSB filter	199.00	179.95
FL-223 1.9 KHz 9 MHz IF SSB filter	84.00	
HM-36 Scanning hand mic	59.00	
MB-19 Rack mounting handles	59.00	
SM-6 Desk microphone	102.00	99.95
SM-8 2-connector desk mic/up/down scan .	160.00	144.95
SP-20 Speaker w/audio filter	248.00	219.95
SP-21 External speaker	110.00	99.95
UT-66 Voice synthesizer	66.00	
IC-765 Xcvr/ps/keyer/auto tuner .....Δ	3300.00	CALL
EX-202 LDA-2 auto bandswitch unit; 730 Dm	26.00	14.95
EX-205 TRV unit for Xvtr switching; 730 ..Dm	26.00	9.95
FL-53 250 Hz CW filter for IC-740 .....Dm	96.00	39.95
FL-54 270 Hz CW filter for IC-730/740/745 Dm	92.00	39.95
FL-70 2.8 KHz wide SSB filter; 751A.....Δm	97.00	29.95
MB-18 Mobile mount for IC-751A .....Dm	43.00	14.95

ICOM - continued

	Reg	Sale
IC-737A Xcvr/Rcvr/tune/kyr/mic/VOX ...Dmwf	1865.00	1299
IC-738 Xcvr/SW Rcvr/tuner/keyer/mic/VOX	1830.00	CALL
IC-736 Xcvr w/6m/tuner/power supply	2334.00	CALL
PS-55 Power supply	286.00	239.95
PS-15 20A power supply	286.00	239.95
AH-3 Automatic antenna tuner	653.00	549.95
AH-2B Bumper mt & whip	303.00	259.95
AT-150 100w 9-band automatic ant tuner .	638.00	529.95
CR-282 High stability crystal unit	134.00	124.95
CR-338 High stability xtal unit; 737A/736 ..	65.00	
FL-52A 500 Hz CW filter (2nd IF)	196.00	179.95
FL-53A 250 Hz CW filter (2nd IF)	196.00	179.95
FL-100 500 Hz CW filter (1st IF)	106.00	99.95
FL-101 250 Hz CW filter (1st IF)	106.00	99.95
HM-36 Extra scanning hand mic	59.00	
MB-49 Mobile mounting bracket	47.00	
SM-6 Desk microphone	102.00	99.95
SP-3 External speaker	112.00	99.95
SP-7 Small external speaker	75.00	
SP-20 Speaker w/audio filter	248.00	219.95
SP-21 External speaker	110.00	99.95
UT-30 Tone encoder	44.00	
EX-241 Marker unit for IC-745 .....Dm	37.00	29.95
EX-242 FM unit for IC-745 .....Dm	75.00	49.95
IC-728 Xcvr/SW Rcvr w/mic	1453.00	CALL
PS-55 Power supply	286.00	239.95
PS-15 20A power supply	286.00	239.95
AH-3 Automatic antenna tuner	653.00	549.95
AH-2B Bumper mt & whip	303.00	259.95
AT-160 Automatic antenna tuner .....Dmwfv	486.00	269.95
CR-64 High stability oscillator crystal	125.00	114.95
FL-100 500 Hz CW filter	106.00	99.95
FL-101 250 Hz CW filter	106.00	99.95
MB-5 Mobile mount	47.00	
SM-6 Desk microphone	102.00	99.95
SP-3 External speaker	112.00	99.95
SP-7 Small external speaker	75.00	
SP-20 Speaker w/audio filter	248.00	219.95
UI-7 AM/FM module for IC-728	95.00	
UT-30 Tone encoder	44.00	
IC-707 Xcvr/SW Rcvr w/mic	1135.00	CALL
PS-55 Power supply	286.00	239.95
PS-15 20A power supply	286.00	239.95
AH-3 Automatic antenna tuner	653.00	549.95
AH-2B Bumper mt & whip	303.00	259.95
AT-160 Automatic antenna tuner .....Dmwfv	486.00	269.95
CR-338 High stability crystal unit	65.00	
FL-52A 500 Hz CW filter (2nd IF)	196.00	179.95
FL-53A 250 Hz CW filter (2nd IF)	196.00	179.95
MB-5 Mobile mount	47.00	
SM-6 Desk microphone	102.00	99.95
SP-3 External speaker	112.00	99.95
SP-7 Small external speaker	75.00	
SP-20 Speaker w/audio filter	248.00	219.95
SP-21 External speaker	110.00	99.95
UI-9 FM module	90.00	
UT-30 Tone encoder	44.00	
IC-706 Mini Xcvr/SW Rcvr w/6 & 2m	1560.00	CALL
AT-180 Automatic antenna tuner; HF+6m ..	599.00	499.95
OPC-598 23' extension cable for AT-180 .	58.00	
FL-100 500 Hz CW filter	106.00	99.95
FL-101 250 Hz CW filter	106.00	99.95
FL-103 2.8 KHz SSB filter	98.00	
FL-223 1.9 KHz 9 MHz IF SSB filter	84.00	
CR-502 High stability oscillator crystal	76.00	
MB-62 Mounting bracket for main unit	20.00	
MB-63 Mounting bracket for control panel .	14.00	
OPC-581 11.5' separation cable	48.00	
OPC-589 8-pin to jack adapter	28.00	
OPC-599 7+8-pin to 13-pin adapter	48.00	
PS-85 Power supply	325.00	279.95
UT-102 Voice synthesizer	59.00	
IC-2KL 160-15m/WARC solid state linear	2981.00	CALL
IC-4KL 1kw output solid state linear	9900.00	CALL
OPC-118 Adapter; 2KL/4KL; 725/735/765 ..	20.00	
AH-2A Antenna tuning system only ....Δmwfv	760.00	499.95
AH-2B Bumper mt & whip	303.00	259.95
OPC-137 Adapt; AH-2/2A - 751A/745 ..Dmwf	20.00	

ICOM - continued

	Reg	Sale
AT-150 100w 9-band automatic ant tuner	638.00	529.95
OPC-137 Adapt; AT-150 - 751A/745 ...Dmwf	20.00	
AT-500 500w 9-band automatic ant tuner	1095.00	919.95
OPC-118 Adapter; AT-500; 725/735/765/781	20.00	

SHORTWAVE RECEIVERS

R-1* .1MHz-1.3GHz AM/FM handheld Rcvr	$635.00	CALL
R-1-15 .1MHz-1.3GHz AM/FM hand Rcvr/cell blkd	500.00	CALL
BP-82 battery FREE with R-1/R-1-15! Limited Time!		
HP-4 Lightweight headphones	23.00	

Note: R-1/R-1-15 use 'W'-series HT accessories

R-71A 100 KHz - 30 MHz dig keyboard Rcvr	1584.00	CALL
CK-70 (EX-299) 12v DC option	33.00	
CR-64 High stability oscillator crystal	125.00	114.95
EX-257 FM unit	87.00	
EX-310 Voice synthesizer	85.00	
FL-32A 500 Hz CW filter	101.00	99.95
FL-44A SSB filter	227.00	199.95
FL-63A 250 Hz CW filter	97.00	
MB-12 Mobile mount	47.00	
RC-11 Infrared wireless remote control	116.00	109.95
SP-3 External speaker	112.00	99.95
R-100* .1MHz-1.856GHz AM/FM 12v Rcvr	935.00	CALL
R-100-11 .1MHz-1.856GHz am/fm 12v Rcv/cell blkd	801.00	CALL
AD-15A Power supply ...Dmwfv	63.00	29.95
AH-7000 25-1000 MHz discone ant w/coax	165.00	149.95
CP-11 Cig cord w/noise filter	32.00	
HP-4 Lightweight headphones	23.00	
R-7000* 25 MHz - 2 GHz scanning receiver	2200.00	CALL
AH-7000 25-1000 MHz discone ant w/coax	165.00	149.95
CK-70 (EX-299) 12v DC option	33.00	
EX-310 Voice synthesizer	85.00	
MB-12 Mobile mount	47.00	
RC-12 Infrared wireless remote control	110.00	104.95
SP-3 External speaker	112.00	99.95
TV-R7000 ATV unit for R-7000	297.00	249.95
R-7100* 25 MHz - 2 GHz scanning Rcvr	2035.00	CALL
R-7100-12 25 MHz-2 GHz scan Rcvr/cell blkd	1768.00	CALL
AH-7000 25-1000 MHz discone ant w/coax	165.00	149.95
MB-5 Mobile mount	47.00	
MB-23 Carrying handle	12.00	
SP-3 External speaker	112.00	99.95
SP-7 Small external speaker	75.00	
SP-20 Speaker w/audio filter	248.00	219.95
TV-R7100 TV/FM adapter	341.00	289.95
UT-36 Voice synthesizer	59.00	
R-9000* .1-1999.8MHz Rcvr/spectrum scope	7508.00	CALL

*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents **ONLY** may purchase unblocked models of R-1, R-100, R-7000, R-7100 and/or R-9000 for official government or communications utility company use only. Mail or FAX purchase order to AES.

SP-20 Speaker w/audio filter	248.00	219.95
UT-36 Voice synthesizer	59.00	

6m TRANSCEIVER

IC-575H 100w 6/10m FM/SSB/CW Xcvr ....Dm	2460.00	1599
AH-610 Dual band 6/10m base ant ..Δmwf	151.00	129.95
EX-20 6/10m automatic ant selector .Δm	107.00	99.95

2m TRANSCEIVERS

$5/10/15 coupon - Icom Accessories thru 12/31/95
Call for Details!

IC-2000H 50w 2m FM Xcvr w/TTP mic	$377.00	CALL
OPC-347 23' DC power cable	37.00	
OPC-589 8-pin to jack adapter	28.00	
UT-85 Tone squelch unit	61.00	
UT-101 DTMF unit	22.00	
IC-281H 50w 2m FM Xcvr/TTP/9600 baud	488.00	CALL
MB-17A Quick release bracket	39.00	
OPC-347 23' DC power cable	37.00	
OPC-440 Mic extension cable	68.00	
OPC-589 8-pin to jack adapter	28.00	
UT-66 Voice synthesizer	66.00	
UT-85 Tone squelch unit	61.00	
IC-275H 100w 2m FM/SSB/CW Xcvr	2100.00	CALL
PS-55 Power supply	286.00	239.95
AG-25 Mast mounted GaSFET preamp	176.00	159.95
CR-64 High stability oscillator crystal	125.00	114.95

ICOM - continued

	Reg	Sale
FL-83 CW filter	120.00	109.95
UT-34 Tone squelch unit	75.00	
UT-36 Voice synthesizer	59.00	
UT-55 DTMF tone enc/dec; 2330A/2340 Δmwfv	55.00	
UT-67 Tone squelch unit; IC-2330A ....Δmwfv	99.00	79.95
IC-2350H 50w 2m/35w 440 FM Xcvr/TTP mic	616.00	CALL
MB-17A Quick release bracket	39.00	
OPC-347 23' DC power cable	37.00	
OPC-440 Mic extension cable	68.00	
OPC-589 8-pin to jack adapter	28.00	
UT-101 Pager/code squelch	22.00	
UT-89 Tone scan/decode unit	88.00	
IC-2700H LTD 50w 2m/35w 440FM/HM90A mic	1000.00	CALL
HM-90A wireless mic FREE w/IC-2700H LTD! Limited Time!		
BC-96 Microphone holder	34.00	
EX-1513 Infrared sub receiver	22.00	
HM-90A Wireless microphone	167.00	149.95
MB-17A Quick release bracket	39.00	
MB-58 Remote controller bracket	31.00	
OPC-347 23' DC power cable	37.00	
OPC-438 11.5' separation kit	33.00	
OPC-439 23' separation kit	48.00	
OPC-440 Mic extension cable	68.00	
OPC-441 Speaker extension cable	26.00	
OPC-589 8-pin to jack adapter	28.00	
UT-66 Voice synthesizer	66.00	
UT-84 Tone squelch unit	88.00	
IC-820H 2m/430 SSB/FM sat Xcvr/9600/no mic	2000.00	CALL
PS-55 Power supply	286.00	239.95
PS-15 20A power supply	286.00	239.95
AG-25 2m mast mounted GaSFET preamp	176.00	159.95
AG-35 430 MHz mast mounted preamp	182.00	164.95
CR-293 High stability xtal unit	304.00	274.95
FL-132 CW filter	106.00	99.95
HM-12 Scan hand microphone	59.00	
MB-5 Mobile mount	47.00	
SM-6 Desk microphone	102.00	99.95
SP-3 External speaker	112.00	99.95
SP-7 Small external speaker	75.00	
SP-20 Speaker w/audio filter	248.00	219.95
SP-21 External speaker	110.00	99.95
UT-36 Voice synthesizer	59.00	
UT-50 Tone decoder	59.00	
IC-Delta-100H 2m/440/1.2 GHz FM Xcvr/TTP	1480.00	CALL
MB-50 Remote controller bracket	23.00	
OPC-332 11.5' separation kit	24.00	
OPC-333 23' separation kit	30.00	
OPC-335 16.4' speaker cable	32.00	
OPC-347 23' DC power cable	37.00	
UT-66 Voice synthesizer	66.00	
UT-75 DTMF decoder unit	55.00	
UT-76 Tone squelch unit	132.00	119.95
AH-32 2m/440 dual band mobile antenna	66.00	
Larsen **PO-K** Roof mt, coax for AH-32	24.00	
Larsen **PO-MM** Magnet mt, coax; AH-32	31.70	
Larsen **PO-TLM** Trunk lip mt, coax; AH-32	27.30	
Icom **AHB-32** Tnk lip mt, coax; AH-32 Δmwfv	61.00	24.95

Accessory for IC-u2AT

BC-50 Desk quick cgr; not for BP-20 .....Dm	$120.00	49.95
BP-21 7.2V 120ma battery .....Dm	46.00	24.95

Accessories for IC-2AT

AD-12 External pwr adapter; 2/4GAT/32AT	$ 34.00	
BA-10 Bottom slide cap	11.00	
BC-16U Wall charger; BP-5A/7/8 only	32.00	
BC-25U Extra wall charger; BP-3 only	28.00	
BC-35 Drop-in rapid charger; all batteries	120.00	109.95
BP-2* 425ma 7.2v long life batt; all HTs	68.00	
BP-3 250ma 8.4v battery; all HTs	52.00	
BP-4 Alkaline battery case; all HTs	28.00	
BP-5* 425ma 10.8v high power batt; all HTs	87.00	
*BC-35 required to charge BP-2/5		
BP-5A 425 ma 10.8v direct charge batt; all	87.00	
BP-7 425ma 13.5v 5w batt; deluxe HTs only	97.00	
BP-8 800ma 8.4v long life batt; all HTs	96.00	
BP-70* Extra 270ma 13.2v batt; 2GAT/32AT	90.00	
*BP-70 9-hours max charge time in BC-35		
CP-1 Cig cgr; BP-3/7/8//DC cord; dlx HTs	21.00	
CP-10 Battery separation cable w/clip	41.00	

ICOM - continued

	Reg	Sale
CP-11 Cig cord w/noise filter; dlx HTs	32.00	
DC-1 DC operation module; std HTs	32.00	
FA-2 Extra 2m flexible antenna	23.00	
FA-140B Extra 2m flex ant for IC-2GAT	23.00	
FA-1443B Extra 2m/440 dual band flex ant	23.00	
HH-SS Handheld shoulder strap	23.00	
HM-9 Speaker/mic; all HTs	58.00	
HM-46 Slim-line speaker/mic	55.00	
HS-10 Boom mic/headset	55.00	
HS-10SA VOX unit (deluxe HTs only)	55.00	
HS-10SB PTT switchbox	55.00	
HS-51 Headset w/VOX	77.00	
LC-2AT Leather case; IC-2AT w/BP-3 .....Dm	28.00	14.95
LC-2GAT Leather case for IC-2GAT .....Dm	28.00	14.95
LC-11 Vinyl case; deluxe HTs w/BP-3 .....Dm	17.00	12.95
LC-38 Vinyl case; 2GAT w/BP-2/3/4 .....Dm	17.00	4.95
LC-39 Vinyl case: 2GAT w/BP-5/70 .....Dm	20.00	4.95
LC-40 Vinyl case; 2GAT w/BP-5A/7/8 .....Dm	20.00	4.95
LC-41 Vinyl case; 32AT w/BP-2/3/4 .....Dm	20.00	3.95
LC-42 Vinyl case; 32AT w/BP-5/70 .....Dm	20.00	2.95
MB-16 Window/car door mount	32.00	
MB-16D Mobile mtg bkt for all HTs	32.00	
MB-24 Window/car door mt; 2GAT .....Δmwfv	32.00	14.95
RB-1 Vinyl waterproof radio bag .....Δmf	39.00	24.95
UT-40 Tone squelch decoder; 2GAT/32AT	66.00	

Accessories for P-series hand-helds

BC-80 Desk cgr; BP-112-114, BP-81-85 Dmwfv	$165.00	149.95
BC-74/BC-110A Extra wall cgr; BP-111-114	32.00	
BP-110 Alkaline battery case .....Dmwfv	28.00	
BP-111 Extra 7.2v 400ma 1.5w battery	68.00	
BP-112 7.2v 700ma 1.5w battery .....Dmwfv	75.00	
BP-113 7.2v 1200ma 1.5w battery	101.00	99.95
BP-114 12v 400ma 5w battery .....Dmwfv	123.00	109.95
CP-12 Cig lighter cable w/filter	29.00	
HM-9 Speaker/microphone	58.00	
HM-46 Slim-line microphone	55.00	
HM-54 Heavy duty speaker/mic	66.00	
HS-51 Headset w/VOX	77.00	
LC-91 Vinyl case; BP-111 .....Dmf	25.00	22.95
LC-92 Vinyl case; BP-110/112 .....Dm	17.00	12.95
LC-93 Vinyl case: BP-113/114 .....Dm	19.00	14.95
MB-30 Mobile/wall bracket	32.00	
OPC-254 Mini DC power cable	11.00	
UT-49 DTMF decoder unit	59.00	

Accessories for IC-2iA

AD-26 Adapter for BC-79A w/BP-121-124	$ 14.00	
BP-120 AA alkaline battery case	28.00	
BP-121 7.2v 400ma battery .....Dmwfv	68.00	
BP-122 7.2v 700ma battery .....Dmwfv	75.00	
BP-123 7.2v 1200ma battery .....Dmfv	101.00	99.95
BP-124 12v 400ma battery .....Dmf	128.00	116.95
HM-9L Speaker/mic	58.00	
LC-83 Vinyl case for BP-121 .....Dmwf	28.00	
LC-84 Vinyl case for BP-120/122 .....Dmwf	28.00	
LC-85 Vinyl case for BP-123/124 .....Dmf	28.00	
IC-W31A 2m/440 HT/batt/cgr/TTP/tone sq	513.00	CALL
IC-Z1A 2m/440 HT/batt/cgr/TT/detach mic/tone sq	655.00	CALL
AD-51 Battery charger adapter	11.00	
BC-74/BC-110A Extra wall cgr; BP-111-114	32.00	
BC-79A Desk charger (adapter required)	165.00	149.95
BP-170 Battery case	28.00	
BP-171 4.8v 700ma battery	66.00	
BP-172 4.8v 950ma battery	73.00	
BP-173 9.6v 600ma battery	120.00	109.95
BP-180 7.2v 600ma battery	66.00	
CP-12 Cig lighter cable w/filter	29.00	
CP-12L Right angle cig cable w/filter	29.00	
HM-46 Slim-line speaker/mic	55.00	
HM-54 Hvy duty spkr/mic	66.00	

AES® GIFT CERTIFICATES...
Information on pp. 23 & 154

Same Day Shipping ... Call Toll Free & Use your Credit Card!

ICOM - continued

	Reg	Sale
HM-75A Remote control microphone	77.00	
HS-85 Headset	84.00	
LC-123 Vinyl case; Z1A w/BP-170/171/172	30.00	
LC-124 Vinyl case; IC-Z1A w/BP-173	30.00	
LC-128 Vinyl case; IC-W31A	30.00	
MB-30 Mobile/wall bracket	32.00	
OPC-254L Right angle mini DC pwr cable	11.00	
SP-13 Earphone	3.00	
UT-93 Tone squelch unit; early IC-Z1A	66.00	
UT-94 Tone squelch unit; early IC-W31A	44.00	
IC-T22A 2m FM HT/batt/cgr/TTP	292.00	CALL
AD-56 Battery charger adapter	14.00	
BC-74/BC-110A Extra wall cgr; BP-111-114	32.00	
BC-79A Desk charger (adapter required)	165.00	149.95
BP-170 Battery case	28.00	
BP-171 4.8v 700ma battery	66.00	
BP-172 4.8v 950ma battery	73.00	
BP-173 9.6v 600ma battery	120.00	109.95
BP-180 7.2v 600ma battery	66.00	
CP-12 Cig lighter cable w/filter	29.00	
CP-12L Right angle cig cable w/filter	29.00	
HM-46 Slim-line speaker/mic	55.00	
HM-54 Hvy duty spkr/mic	66.00	
HM-75A Remote control microphone	77.00	
HS-85 Headset	84.00	
LC-125 Vinyl case; T22A w/BP170/71/72	30.00	
LC-126 Vinyl case; T22A w/BP173	30.00	
MB-30 Mobile/wall bracket	32.00	
OPC-254 Mini DC power cable	11.00	
OPC-254L Right angle mini DC pwr cable	11.00	
SP-13 Earphone	3.00	
UT-94 Tone squelch unit	44.00	
IC-V21AT 2m/220 FM HT/batt/cgr/TTP	615.00	CALL
IC-W21AT 2m/440 FM HT/batt/cgr/TTP Dmwfcv	536.00	399.95
HM-46 FREE with IC-W21AT until gone!		
$40 coupon - IC-W21AT until gone!		
AD-25 Battery charger adapter	50.00	
AD-28 Batt pack adapter for rapid charger	14.00	
BC-77/BC-105A Extra wall charger	32.00	
BC-79A Desk charger (adapter required)	165.00	149.95
BP-130 Battery case	28.00	
BP-131 900ma 7.2v battery/mic	106.00	99.95
BP-132 600ma 12v battery/mic	120.00	109.95
BP-157 900ma 7.2v battery	68.00	
CP-13 Cig cable w/filter	32.00	
CP-13L Right angle cig cable w/filter	32.00	
HM-9 Speaker/microphone	58.00	
HM-46 Slim-line speaker/mic	55.00	
HM-54 Hvy duty spkr/mic	66.00	
HM-55A Speaker/mic w/TTP	127.00	109.95
HM-75 Speaker/mic w/remote control	77.00	
HS-51 Headset w/VOX	77.00	
LC-103 Vinyl case; W21A/BP130/131 Dmwv	30.00	24.95
LC-104 Vinyl case; W21A w/BP-132 ....Dmw	30.00	24.95
LC-105 Vinyl case; IC-W21AT w/BP-130/131	30.00	
LC-106 Vinyl case; IC-W21AT w/BP-132	30.00	
MB-30 Mobile/wall bracket	32.00	
OPC-288 Mini DC power cable	15.00	
OPC-288L Right angle mini DC pwr cable	15.00	

Accessories for IC-2SAT/2SRA/24AT/W2A

AD-14 BC-74 charge adapter	$ 34.00	
AD-20 BC-77 charge adapter .....Dmwfv	50.00	
AH-20 Replacement rcv ant for IC-2SRA	22.00	
BA-11 Bottom cap	9.00	
BA-12 Drop-in charger adapter	23.00	
BC-72 Rapid desk charger	149.00	134.95
BC-74/BC-110A Extra wall cgr; 24AT/S-series	32.00	
BC-77/BC-105A Extra wall cgr; W2A/2SRA	32.00	
BP-81 7.2v 110ma battery .....Δmwfv	61.00	49.95
BP-82 7.2v 300ma battery	66.00	

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AES®
SERVICIOS INTERNACIONALES
1-407-898-1166
See p. 152

ICOM - continued

	Reg	Sale
BP-83 7.2v 600ma battery	72.00	
BP-84 7.2v 1000ma battery	96.00	
BP-85 12v 340ma 5w battery	124.00	112.95
BP-90 AA battery case	28.00	
CP-12 Cig lighter cable w/filter	29.00	
CP-13 Cig cable w/filter; W2A/2SRA	32.00	
HM-9 Speaker/microphone	58.00	
HM-46 Slim-line speaker/mic	55.00	
HM-54 Hvy duty spkr/mic; not for 2G/W2A	66.00	
HM-65 Slim-line spkr/mic; W2A/2SRA	61.00	
HM-70 Speaker/mic; W2A/2SRA .....Dmwfv	66.00	
HS-51 Headset w/VOX	77.00	
HS-60 VOX headset; W2A/2SRA .....Dmwf	88.00	49.95
LC-24(L) Leather case; 24AT/BP-85 .....Dm	21.00	19.95
LC-53 Vinyl case; 2SA w/no battery .....Dm	21.00	2.95
LC-57 Vinyl case; 2SAT w/no battery .....Dmv	21.00	19.95
LC-61 Vinyl case; 2SAT w/BP-84/85 .....Dm	21.00	19.95
LC-63 Vinyl case; 24AT/BP-81/BA-11 .....Dm	17.00	6.95
LC-66 Vinyl case; 24AT w/BP-84/85 .....Dmv	21.00	16.95
LC-71 Case; W2A/2SRA w/BP81/BA11 Dmwfv	28.00	9.95
LC-72 Case; W2A/2SRA w/BP-82/83/90 ...Dfv	28.00	
LC-SAT(L) Leather case; 2SAT w/BP-85 ....Dm	28.00	14.95
MB-22 Alligator belt/pocket clip	12.00	
MB-25 Stainless steel wall storage unit	33.00	
MB-30 Mobile/wall bracket	32.00	
OPC-254 Mini DC power cable	11.00	
OPC-288 Mini DC pwr cord; W2A/2SRA	15.00	
UT-49 DTMF decoder unit for S-series	59.00	
UT-50 Tone decoder	59.00	
UT-51 Programmable tone encoder unit	66.00	
IC-2GXAT/HP 7w 2m FM HT/batt/cgr/TTP	359.00	CALL
AD-25 Battery charger adapter	50.00	
AD-28 Batt pack adapter for rapid charger	14.00	
BC-77/BC-105A Extra wall charger	32.00	
BC-79A Desk charger (adapter required)	165.00	149.95
BP-130A Battery case	28.00	
BP-132A 600ma 12v battery/mic	120.00	109.95
BP-157A 900ma 7.2v battery	68.00	
BP-160 700ma 7.2v battery	53.00	
BP-174 600ma 12v battery	106.00	99.95
CP-13 Cig cable w/filter	32.00	
CP-13L Right angle cig cable w/filter	32.00	
HM-46 Slim-line speaker/mic	55.00	
HM-54 Heavy duty spkr/mic	66.00	
HM-55A Speaker/mic w/TTP	127.00	109.95
HS-51 Headset w/VOX	77.00	
LC-116 Carrying case; BP-130A/157A/160	30.00	
LC-117 Carrying case for BP-132A	30.00	
MB-30 Mobile/wall bracket	32.00	
OPC-288 Mini DC power cable	15.00	
OPC-288L Right angle mini DC pwr cable	15.00	
SP-13 Earphone	3.00	
UT-49 DTMF decoder unit	59.00	
IC-Delta-1A 2m/440/1.2 FM HT/batt/cgr/TTP	866.00	CALL
AD-22 External battery charge adapter	50.00	
AD-27 Charge adapt; BP-101 - 103/BC-79	14.00	
BP-100 Battery holder	28.00	
BP-101 700ma 7.2v battery	75.00	
BP-102 1200ma 7.2v battery	103.00	99.95
BP-103 600ma 12v battery	121.00	109.95
CP-13 Cig cable w/filter	32.00	
CP-13L Right angle cig cable w/filter	32.00	
LC-81 Vinyl case for BP-100/101/102	28.00	
LC-82 Vinyl case for BP-103	28.00	
OPC-288 Mini DC ppower cable	15.00	
OPC-288L Right angle mini DC pwr cable	15.00	
UT-70 Tone encoder/decoder	160.00	144.95
IC-T21A 2m FM HT/batt/cgr/TTP	375.00	CALL
AD-44 Desk charger adapter	14.00	
BC-74/BC-110A Extra wall charger	32.00	
BC-79A Desk charger (adapter required)	165.00	149.95
BP-151 800ma 6v battery	46.00	
BP-152 1100ma 6v battery	53.00	
BP-153 600ma 12v battery	120.00	109.95
BP-159 Battery case	28.00	
CP-12 Cig lighter cable w/filter	29.00	
CP-12L Right angle cig cable w/filter	29.00	
HM-46 Slim-line speaker/mic	55.00	

ICOM - continued

	Reg	Sale
HM-54 Heavy duty spkr/mic	66.00	
HM-55A Speaker/mic w/TTP	127.00	109.95
HM-75A Remote control microphone	77.00	
HS-51 Headset w/VOX	77.00	
LC-109 Vinyl case for BP-151/159	30.00	
LC-110 Vinyl case for BP-153	30.00	
LC-111 Vinyl case for BP-152	30.00	
MB-30 Mobile/wall bracket	32.00	
OPC-254 Mini DC power cable	11.00	
OPC-254L Right angle mini DC pwr cable	11.00	
SP-13 Earphone	3.00	
RP-1520 25w 2m FM repeater	3025.00	CALL

220 MHz TRANSCEIVERS

IC-03AT 2.5w 220 HT/batt/cgr/TTP	$400.00	CALL
IC-3SAT 2/5w 220 HT/batt/cgr/TTP .....Dmwfv	468.00	338.95
IC-03AT uses same accessories as IC-02AT/HP		
IC-3SAT uses same accessories as IC-2SAT		
IC-38A 25w 220 FM Xcvr w/TTP mic	600.00	CALL
HM-56A Extra autodial TTP mic	138.00	124.95
RP-2210 25w 220 MHz FM repeater	2700.00	CALL

430/440 MHz TRANSCEIVERS

IC-481H 50w 440 FM Xcvr/TTP/9600 baud	$665.00	CALL
IC-4GXAT 440 FM HT/batt/cgr/TTP	380.00	CALL
IC-P4AT Mini 440 FM HT/batt/cgr/TTP .Dmwfv	504.00	269.95
$50 coupon - IC-P4AT until gone!		
IC-4iA 440 FM HT/batt/cgr .....Dm	320.00	169.95
IC-T41A 440 FM HT/batt/cgr/TTP	400.00	CALL
IC-T42A 440 FM HT/batt/cgr/TTP	384.00	CALL
IC-X21AT 440/1.2 FM HT/batt/cgr/TTP	900.00	CALL
IC-4GXAT uses same accessories as IC-2GXAT		
IC-P4AT uses same accessories as IC-P2AT		
IC-4iA uses same accessories as IC-2iA		
IC-T41A uses same accessories as IC-T21A		
IC-T42A uses same accessories as IC-T22A		
IC-X21AT uses same accessories as IC-W21AT		
IC-475H 75w 430-450 FM/SSB/CW Xcvr	2300.00	CALL
PS-55 Power supply	286.00	239.95
AG-35 Mast mounted preamp	182.00	164.95
CR-64 High stability oscillator crystal	125.00	114.95
FL-32A CW filter	101.00	99.95
UT-34 Tone squelch unit	75.00	
UT-36 Voice synthesizer	59.00	
RP-4020 25w 440 MHz FM repeater .....Dmwv	2637.00	1699
RP-4020/50w 50w 440 MHz FM repeater	3200.00	CALL

1.2 GHz EQUIPMENT

CR-263 High stability unit; IC-1275A .....Dm	$123.00	39.95
RP-1220 10w 1.2 GHz FM repeater	3450.00	CALL

ACCESSORIES FOR IC-901

MB-21 Bracket for controller unit .....Δmv	$ 21.00	
MB-31 Mounting bkt for band units .....Δmw	15.00	
MB-32 Mobile mount for trunk .....Δm	23.00	
OPC-189 Fiber optic cbl 65' extension .....Δm	83.00	79.95
OPC-243 30' DC cable .....Δm	37.00	34.95
UT-48 DTMF encoder/decoder unit .....Dmf	59.00	
UX-S92A 2m SSB/CW module .....Dm	679.00	199.95
UX-39A 25w 220 unit .....Dm	516.00	199.95
IC-970H 45w 2m/430 Xcvr w/ps **Special Order**	4350.00	CALL
AG-1200 1.2 GHz mast mounted preamp	151.00	139.95
TV-970 1.2 GHz ATV unit for 970A/H ...Δwfv	561.00	349.95
UX-R96 Extended receive unit .....Δmv	500.00	369.95
UX-97A 1.2 GHz module .....**Special Order**	1255.00	1049
UX-98 2.4 GHz module .....**Special Order**	2321.00	1899

ACCESSORIES

CT-16 Satellite interface unit	$128.00	116.95
CT-17 CI-V level converter	135.00	124.95
UX-14 CI-IV/CI-V converter for CT-17	99.00	
EX-309 Interface plug; 751/271/R71A .....Δm	97.00	24.95
EX-310 Voice synthesizer	85.00	
EX-627 HF auto ant selector; 7 ants ...Δmwfv	410.00	299.95
HM-7 Amplified mobile mic, 8-pin	59.00	
HM-8 TTP microphone, 8-pin .....Δmwfv	105.00	89.95
HM-12 Scan hand microphone	59.00	
HM-14 Scan/TTP mic; 25A/H/28A/45A	90.00	
HS-15 Goose neck mobile microphone ..Dmwf	54.00	19.95
HS-15SB PTT switchbox for HS-15 .....Dmf	37.00	14.95
MB-23 Side mount carrying handle	12.00	

ICOM - continued

	Reg	Sale
OPC-047 24-pin optional acc cord .....Δmwfv	19.00	9.95
OPC-137 24-pin adaptr cbl; all base ...Dmwf	20.00	
PS-30 20A systems ps w/6-pin cord .....Δmf	466.00	349.95
OPC-052 2-pin cord .....Δmfv	12.00	6.95
OPC-053 4-pin cord .....Δmv	12.00	6.95
PS-45 Compact 8A power supply .....Δm	193.00	149.95
PS-85 Power supply	325.00	279.95
SM-6 Electret desk microphone	102.00	99.95
SM-8 2-connector desk mic w/up/down scan	160.00	144.95
SM-20 Stand mic for base stations	207.00	189.95
SP-3 External speaker	112.00	99.95
SP-5 Mobile speaker	43.00	
SP-7 Small external speaker	75.00	
SP-10 Slim-line external speaker	55.00	
SP-12 Slim-line speaker w/visor clip	35.00	
SP-20 Speaker w/audio filter	248.00	219.95
GP-22 GPS unit	500.00	CALL

$5/10/15 coupon - Icom Accessories thru 12/31/95
Call for Details!

INNOVA (INN)

06-1101 12vdc 6.5 amp/hr power pack...Dmv	$ 61.52	49.95
06-9509 AC/DC adapter .....Δmf	13.62	9.95
06-1130 Compact 12vdc 3 amp/hr pack/adapt	61.50	49.95

INTERFLEX (INT)

dspGOLD Software for AEA DSP-2232 .....f	$129.95	
KaGOLD DualPort Software for KPC/KAM ....f	79.95	
KaGOLD DualPort **w/Pactor** Soft; KPC/KAM .....f	99.95	
PkGOLD Enhanced Software; PK-88/232 ...Δf	79.95	59.95
PkGOLD w/Pactor Software for PK-232MBX .f	99.95	
PkGOLD/900 Software for PK-900 .....f	129.95	

JPS (JPS)

ANC-4 Antenna noise canceller	$175.00	169.95
NF-60 Auto DSP audio spectral notch filter ...	160.00	149.95
NIR-10 Dlx noise/notch DSP bandpass filter .	299.95	279.95
NIR-12 Dual DSP noise reduction/filter unit ..	349.95	329.95
NRF-7 Noise reducer and filter unit.....	219.95	199.95
NTR-1 Wide band noise and tone remover	169.95	159.95
SSTV-1 DSP slow scanTV filter .....m	160.00	149.95
Power Pack 115vac/12vdc adapter	16.00	

JRC (JRC)

CFQ-3003 Transceive cable set .....Δm	$122.00	49.95
CFQ-3890 JST-135/JRL-2000F control cbl ...Δm	68.00	29.95

JSC (JSC)

ROTOR CABLE

JRR-420 4-wire; U-105/U-110 .....Δw, per ft.	17¢
JRR-420 .....Δw, **100** ft. Roll	14.95
JRR-420 .....Δw, **500** ft. Roll	49.95
JRR-520 5-wire; AR-40 .....Δmw, per ft.	19¢
JRR-520 .....Δmw, **100** ft. Roll	16.95
JRR-520 .....Δmw, **500** ft. Roll	59.95
JRR-520 .....Δmw, **1000** ft. Roll	99.95

COAX ASSEMBLIES w/PL-259s

JFB-58-12LP 12' RG-58U, PL-259 - lugs .Dmwfv	$ 6.99	1.95
JFB-58-20LP 20' RG-58U, PL-259 to lugs ...Dm	8.49	3.95

K-COM (KCO)

RF-1 Modular telephone RFI filter	$ 16.95
RF-1/2-line Two-line modular RFI filter	22.95
RF-1/coiled Coiled cord modular RFI filter	22.95
RF-2 Hard-wired telephone RFI filter	10.95

KLM (KLM)

ANTENNAS

160V 160, 80 or 40m vertical, 24' high .....†v	$294.80	199.95
80M-1 80m rotatable dipole, 90' long .....*T	966.90	749.95
80M-1R 80m rotatable dipole w/relays .....*T	1358.50	1069
80M-2 80m 2 el beam, 36' boom, 4 db .....*T	3184.50	2499
80M-2R 80m 2 el beam w/relays .....*T	3939.10	3099
80M-3 80m 3 el beam, 60' boom, 7 db .....*T	4792.00	4169
80M-3R 80m 3 el beam w/relays .....*T	6285.40	5299
SSV-80-40-15 80/40/15m vert, 65' high ...*T	946.00	749.95
6-12-8LPA 6-12 MHz 8el LP, 36' boom .....*T	2414.00	1899
Heavy duty boom only for **6-12-8LPA** .....*T	490.00	419.95
6-12-8LPA w/Heavy duty boom .....*T	2606.00	2199
6-30-15LPA 6-30 MHz 15el LP, 46' boom ...*T	3992.00	3099

KLM - continued

		Reg	Sale
7.2/10-30-LPA 7,10-30MHz 8 el, 42' bm ...*T		1325.00	1129
Heavy duty boom only for **7.2/10-30**-LPA .*T		454.00	389.95
7.2/10-30-LPA **w/heavy duty boom** .....*T		1747.00	1479
40M-1B 40m rotatable dipole, 46.5' boom ..*		255.20	199.95
40M-2B 40m 2 el beam, 16' boom, 4.9 db ..*		625.90	499.95
40M-3B 40m 3 el beam, 32' boom, 6.5 db ..*		855.80	699.95
Heavy duty boom only for **40M-3B** .....*T		336.00	289.95
40M-3B w/heavy duty boom .....*T		1104.40	929.95
40M-4B 40m 4 el beam, 42' boom, 7.2 db ..*		1186.90	929.95
Heavy duty boom only for **40M-4B** .....*T		454.00	389.95
40M-4B w/heavy duty boom .....*T		1559.80	1299
40-10V 40/20/15/10m 26.5' vertical .....†m		365.20	249.95
10-30-7LPA 10-30MHz 7el LP, 30' bm, 7db *T		1124.00	879.95
Heavy duty boom only for **10-30-7LPA** .....*T		443.00	369.95
10-30-7LPA w/heavy duty boom .....*T		1489.00	1199
SK-8 Conv kit for 10-30 log w/o 40m dipole *T		303.00	259.95
SK-8/40M Conv kit for 10-30 log w/40m dipole .*T		456.00	389.95
KT-31 20-15-10m 24.5' rotatable dipole †mfv		310.20	199.95
KT-34A 20-15-10m, 4 el, 16' boom, 7 db		616.00	529.95
KT-34 Upgrade kit - KT-34A to XA .....†v		326.70	249.95
KT-34XA 20-15-10m, 6 el, 32' bm, 9db ..†Tm		884.40	599.95
KT-34XA 20-15-10m, 6 el, 32' boom, 9 db		884.40	749.95
Heavy duty boom only for **KT-34XA** .....*T		341.00	289.95
KT-34XA w/heavy duty boom .....*T		1095.60	929.95
20M-4 20m 4 el beam, 21' boom, 7.7 db ...*T		530.20	419.95
20M-5 20m 5 el beam, 42' boom, 9.7 db ...*T		820.60	649.95
Heavy duty boom only for **20M-5** .....*T		454.00	389.95
20M-5 w/heavy duty boom .....*T		1224.30	959.95
20M-6 20m 6 el beam, 57' boom, 11 db ....*T		1180.30	929.95
Heavy duty boom only for **20M-6** .....*T		600.00	509.95
20M-6 w/heavy duty boom .....*T		1590.60	1349
20-30-6LPA 20-30MHz, 6el LP, 19'bm, 7db *T		383.00	299.95
17M-3 17m 3el beam, 16.75' bm, 6.5db †Tm		471.90	299.95
15M-4 15m 4 el beam, 14' boom, 7.7db ....*T		281.60	224.95
15M-6 15m 6 el beam, 36' boom, 10.5db ..*T		663.30	519.95
Heavy duty boom only for **15M-6** .....*T		369.00	319.95
15M-6 w/heavy duty boom .....*T		899.80	759.95
15M-6LD As 15M-6, but light duty .....*T		498.30	399.95
12-17-30D WARC tri-band dipole .....†m		310.20	169.95
12-17-30V WARC tri-band vertical .....*		162.80	149.95
10M-4 10m 4 el beam, 10' bm, 7.7 db .....*T		257.40	199.95
10M-6 10m 6 el beam, 27.5' boom, 11 db ..*T		405.90	329.95
JV-10 10m 26' vertical antenna .....†wf		119.00	79.95

Note: All KLM antennas supplied with a KLM balun/matching system, which is included in the price.

6M-5 6m 5 el beam, 11.75' boom, 9.7 db	255.20	219.95
6M-7LB 6m 7el, 25.75' bm, 11.5db .....†Tmv	371.80	249.95
6M-7LD 6m 7 el beam, 20' boom, 10.5 db	293.70	239.95
6M-10 6m 10 el beam, 34' boom, 11.7 db .*T	493.90	419.95
6M-14 6m 14 el beam, 61' boom, 14 db ....*T	685.30	579.95
JV-6 6m 15' vertical antenna, 3 db .....†mf	126.00	99.95
2M-4X 2m 4 el rear mt beam, 4.2' bm, 8.5db	79.20	69.95
2M-8 2m 8 el beam, 7.25' boom, 10.3 db	124.30	109.95
2M-11X 2m 11 el beam, 15.33' bm, 12.5 db .	106.70	94.95
2M-13LBA 2m 13 el beam, 21.5' bm, 13.3db	121.00	104.95
2M-14C 2m circ 14 el beam, 12.9' bm, 11db	206.80	179.95
2M-16LBXM 2m 16 el beam, 28' boom, 14.5db .	235.00	199.95
2M-20LBX 2m 20 el beam, 38.5' boom	286.00	259.95
2M-22C 2m circ 22 el beam, 19' bm, 13 db ..	256.00	229.95
JV-2 2m 5' vertical antenna, 3 db	129.00	109.95
JV-2X 2m 11' vertical antenna, 5 db	176.00	149.95
220-7 220 7 el beam, 4.75' bm, 8.8 db	95.70	84.95
220-14X 220 14 el beam, 14.5' bm, 13.5db ..	138.60	119.95
220-22LBX 220 22el beam, 29.75'bm, 15.6db .	174.90	139.95
JV-220X 220 7' vertical antenna, 5 db .†mwv	163.00	89.95
432-20LBX 432 20 el beam, 12.33'bm, 15.3db	184.80	149.95
432-30LBX 432 30 el beam, 22'bm, 17.3db ..	216.70	179.95
435-18C 432 circ 18 el beam, 7'bm, 12 db ...	257.00	219.95
435-40CX 432 circ 40 el beam, 14.5'bm, 15.2db .	278.00	259.95
440-6X 440 6 el beam, 2.33' boom, 8.9 db ...	63.00	56.95
440-10X 440 10 el beam, 5.33' bm, 11.2 db .	76.00	69.95
440-16X 440 16 el beam, 10.33'bm, 14.2db .	139.00	119.95
1.2-15LBX 1.2 GHz 15 el beam	115.50	104.95
1.2-24LBX 1.2 GHz 24 el beam	139.70	119.95
1.2-44LBX 1.2GHz 44el beam, 12'bm, 18.2db	194.70	169.95
CS-2 Extra 432 ant circularity switch	80.00	

FIBERGLASS MASTS

5' 1½" OD fiberglass **mast**	$ 40.00	29.95

KLM - continued

	Reg	Sale
7-1/2' 1½" OD fiberglass **mast**	50.00	44.95

COUPLERS/POWER DIVIDERS

440-2N 432 MHz - for 2 ants, w/type N	$ 75.00	
440-4N 432 MHz - for 4 ants, w/type N	90.00	84.95

FERRITE BALUNS

3-60-1:1 3-60 MHz 4kw PEP 1:1 balun	$ 54.00	
3-60-4:1 3-60 MHz 5kw PEP 4:1 balun	66.00	
50-150-1:1 50-150MHz 500w PEP 1:1 bln Dmw	56.00	24.95

***These antennas are drop-shipped (shipped direct to you from the KLM factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Monroe, Washington via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.**

KANTRONICS (KAN)

D4-10 10w 440 MHz data radio	$369.95	339.95
Data Engine TNC w/no modems	319.95	299.95
Data Engine w/DE-1200 modem	389.95	359.95
DE-1200 1200 baud modem	79.95	
DE-19K2/9K6 19,200/9600 baud modem ...	99.95	
Host Master II Plus IBM software; Data Eng	69.95	
KPC-2 Packet Communicator II controller ...Dmv	179.95	159.95
KPC-3 Small packet TNC w/32K RAM	119.95	
KPC-3/128K Small packet TNC w/128K RAM .	144.95	139.95
KPC-9612 9600 baud controller/32K mem	219.95	199.95
128K 128K memory upgrade; KPC-3/9612 ..	24.95	
KPC-9612/128K 9600 controller/128K mem ..	239.95	219.95
KAM Plus All Mode Communicator	339.95	CALL
12VDC Adaptor 300ma adapt; KAM Plus/KPC3	9.95	
Host Master 64 Software; C-64/128 Dmwfv	69.95	59.95
Host Master II+ IBM software	69.95	
Host Master Mac Macintosh software	69.95	
Pactor Eprom option; KAM (**pre**-V5) ....Dmv	79.95	59.95
Pactor Eprom option; KAM (version 5) ..Dm	59.95	44.95
Package 1 Enhancement board; KAM w/8.0E	99.95	
Package 2 8.0E upgrade; KAM enhance brd ..	24.95	
Package 3 8.0P upgrade; KAM Plus	24.95	
KPC-4 Dual port VHF packet Communicator ..	259.95	239.95
PC Combo Software for IBM .....Dmfv	49.95	9.95
64/128 Combo Software for C-64/128 Dmv	49.95	9.95
Superfax II WX FAX program for IBM	49.95	
G-TOR Book	19.95	
KTU Weathernode rem WX unit w/temp .Dmwv	249.95	229.95
Anemometer Wind speed sensor .....Dmfv	119.95	

KENWOOD (KEN)

TS-950SDX Dlx Xcvr w/keyer/DSP/filters	5299.95	CALL
DRU-2 Digital recording unit	149.95	139.95
IF-232C Level translator	129.95	119.95
MC-43S Extra 8-pin hand mic w/up-down ..	59.95	
MC-60A 8-pin amp desk mic w/up-down ...	159.95	149.95
MC-80 8-pin electret desk mic w/up-down .	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic .	169.95	159.95
MC-90 2-head DSP desk microphone	269.95	239.95
SM-230 Station monitor w/pan display	1199.95	1039
SP-950 External spkr w/audio filters	159.95	149.95
VS-2 Voice synthesizer	69.95	
YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164.95
YK-88CN-1 270 Hz CW filter (1st IF)	139.95	129.95
YK-88SN-1 1.8 KHz SSB filter (1st IF)	139.95	129.95
TS-870S 9-band Xcvr/SW Rcvr/IF-DSP/tuner .	3199.95	CALL
DRU-3 Digital recording unit	139.95	129.95
MC-43S Extra 8-pin hand mic w/up-down ..	59.95	
MC-60A 8-pin amp desk mic w/up-down ...	159.95	149.95
MC-80 8-pin electret desk mic w/up-down .	119.95	109.95
MC-90 2-head DSP desk microphone	269.95	239.95
PS-52 Heavy duty power supply	309.95	269.95

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KENWOOD - continued

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SM-230 Station monitor w/pan display	1199.95	1039
SO-2 TCXO unit	189.95	179.95
SP-31 External speaker	99.95	
VS-2 Voice synthesizer	69.95	
TS-850S 9-band Xcvr/.1-30 MHz Rcvr/mic	1999.95	CALL
$100 rebate from Kenwood - TS-850S thru 12/30/95		
AT-850 Internal auto antenna tuner	279.95	249.95
TS-850S/AT 9-band Xcvr/.1-30 MHz Rcvr/tuner	2199.95	CALL
$100 rebate from Kenwood - TS-850S/AT thru 12/30/95		
AT-300 External auto antenna tuner	699.95	609.95
DRU-2 Digital recording unit	149.95	139.95
DSP-100 External dig sig processor	679.95	589.95
IF-232C Level translator	129.95	119.95
MC-43S Extra 8-pin hand mic w/up-down	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic	169.95	159.95
MC-90 2-head DSP desk microphone	269.95	239.95
PG-2X Heavy duty DC cable	37.95	
PS-52 Heavy duty power supply	309.95	269.95
RM-1 Remote control unit	59.95	
SM-230 Station monitor w/pan display	1199.95	1039
SO-2 TCXO unit	189.95	179.95
SP-31 External speaker	99.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	169.95	159.95
YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164.95
YK-88C-1 500 Hz CW filter (1st IF)	139.95	129.95
YK-88CN-1 270 Hz CW filter (1st IF)	139.95	129.95
YK-88SN-1 1.8 KHz SSB filter (1st IF)	139.95	129.95
TS-450S 9-band Xcvr/SW Rcvr/mic	1469.95	CALL
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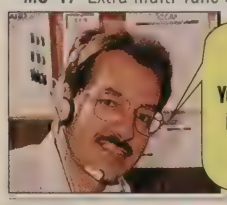
TS-690S 9-band Xcvr w/6m/SW Rcvr/mic	1769.95	CALL
AT-450 Internal 80-10m auto tuner	279.95	249.95
TS-450S/AT 9-band Xcvr/SW Rcvr/tuner/mic	1649.95	CALL
$50 rebate from Kenwood - TS-450S/AT thru 12/30/95		
AT-50 External auto tuner	379.95	329.95
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External auto antenna tuner	699.95	609.95
DSP-100 External dig sig processor	679.95	589.95
IF-232C Level translator	129.95	119.95
MB-430 Mobile mounting bracket	49.95	
MC-43S Extra 8-pin hand mic w/up-down	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic	169.95	159.95
MC-90 2-head DSP desk microphone	269.95	239.95
PG-2X Heavy duty DC cable	37.95	
PS-33 Light duty 20.5A power supply	239.95	209.95
PS-53 Heavy duty 22.5A power supply	289.95	249.95
SO-2 TCXO unit	189.95	179.95
SP-23 External speaker	89.95	
TU-8 CTCSS tone unit	54.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	169.95	159.95
YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164.95
YK-88C-1 500 Hz CW filter (1st IF)	139.95	129.95
YK-88CN-1 270 Hz CW filter (1st IF)	139.95	129.95
YK-88S-1 2.4 KHz SSB filter (1st IF)	139.95	129.95
YK-88SN-1 1.8 KHz SSB filter (1st IF)	139.95	129.95
YK-455C-1 500 Hz CW filter	114.95	109.95
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt	1359.95	CALL
$50 rebate from Kenwood - TS-50S thru 12/30/95		
TS-60S Compact 6m Xcvr/mic/mt	1239.95	CALL
AT-50 External HF auto tuner	379.95	329.95
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External HF auto antenna tuner	699.95	609.95
IF-10D Computer interface	89.95	
IF-232C Level translator	129.95	119.95
MB-13 Deluxe quick release mtg bracket	55.95	
MC-47 Extra multi-func 8-pin hand mic	59.95	



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MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic	169.95	159.95
PG-2Y DC cable	39.95	
PS-33 Light duty 20.5A power supply	239.95	209.95
PS-53 Heavy duty 22.5A power supply	289.95	249.95
SO-2 TCXO unit	189.95	179.95
SP-23 External speaker	89.95	
TC-50/50Case Travel case for TS-50S/60S	89.00	
YK-107C 500 Hz CW filter	139.95	129.95
TS-140S 9-band Xcvr/.5-30 MHz Rcvr/mic	1149.95	CALL
AT-50 External auto tuner	379.95	329.95
PG-4M 18' extension cable for AT-50	29.95	
MB-430 Mobile mounting bracket	49.95	
MC-43S Extra 8-pin hand mic w/up-down	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic	169.95	159.95
PG-2X Heavy duty DC cable	37.95	
PS-33 Light duty 20.5A power supply	239.95	209.95
SP-23 External speaker	89.95	
TU-8 CTCSS tone unit	54.95	
YG-455C-1 500 Hz CW filter	169.95	159.95
YK-455C-1 500 Hz CW filter	114.95	109.95
R-5000 100 KHz-30 MHz digital receiver	1249.95	CALL
DCK-2 DC cable kit w/cig plug	14.95	
IC-10 IC kit for computer control	46.95	
IF-232C Level translator	129.95	119.95
MB-430 Mobile mounting bracket	49.95	
SP-23 External speaker	89.95	
VC-20 108-174 MHz VHF converter	229.95	199.95
YK-88A-1 AM filter	104.95	99.95
YK-88C 500 Hz CW filter	139.95	129.95
YK-88CN 270 Hz CW filter	104.95	99.95
YK-88SN 1.8 KHz SSB filter	139.95	129.95
HS-5 Deluxe headphones	79.95	
HS-6 Lightweight headphones	59.95	
HW-3 v2.3 3½" HamWindows IBM soft Δmwfv	139.95	129.95
LF-30A 1kw PEP low pass filter	64.95	
MA-5 5-band 200w PEP HF mobile antenna	189.95	174.95
VP-1 Hvy duty chrome spg, bpr mt for MA-5	64.95	
MC-43S 8-pin hand mic w/up-down switch	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin electret desk mic	169.95	159.95
MJ-48 4-pin mic to 8-pin Xcvr adapt	19.95	
MJ-64 6-pin mic to 4-pin Xcvr adapt .....Dm	14.95	49¢
E30-1765-08 Adapt cord; MC-85 - 8-pin Xcvr	21.95	
PC-1A 8-pin phone patch	139.95	129.95
PG-3B 15A DC line noise filter	29.95	
PG-3G 25A DC line noise filter	51.95	
RCS-1 Radio Construction Set IBM soft ....Δmv	49.95	19.95
SP-41 Compact external speaker	49.95	
SP-50B High quality external mobile speaker	55.95	
SW-2100 1.8-30MHz 2kw SWR/power meter	174.95	159.95
TU-7 Prog encoder; TR-751A .....Δm	54.95	
TM-255A 40w 2m SSB/FM Xcvr/9600 baud	1109.95	CALL
TM-455A 35w 430-440 SSB/FM Xcvr/9600	1279.95	CALL
DFK-3 9' separate display cable kit	26.95	
DFK-4 13' remote cable kit	59.95	
DFK-7A Deluxe 22' remote cable kit	99.95	
PG-5A Packet data cable	15.95	
TSU-8 CTCSS decoder	59.95	
TS-790A 45w 2m/40w 440 SSB/FM Xcvr/mic	2199.95	CALL
IF-232C Level translator	129.95	119.95
MC-43S Extra 8-pin hand mic w/up-down	59.95	
MC-60A 8-pin amp desk mic w/up-down	159.95	149.95
MC-80 8-pin electret desk mic w/up-down	119.95	109.95
MC-85 Multi-function 8-pin elect desk mic	169.95	159.95
PG-2X Heavy duty DC cable	37.95	
PS-31 Power supply .....Dmwfv	219.95	179.95
SP-31 External speaker	99.95	
TSU-5 Programmable CTCSS decoder	64.95	
UT-10 10w 1.2 GHz module	629.95	539.95
VS-2 Voice synthesizer	69.95	
TM-642A 2m/220 FM Xcvr w/TTP	959.95	CALL
TM-742A 50/35w 2m/440 FM Xcvr w/TTP	949.95	CALL
$45 rebate from Kenwood - TM-742A thru 12/30/95		

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TM-942A 50/35/10w 2m/440/1.2 FM/TTP	1309.95	CALL
DFK-3 9' separate display cable kit	26.95	
DFK-4 13' remote cable kit	59.95	
DFK-7 Deluxe 22' remote cable kit	89.95	
MJ-88 Modular to 8-pin mic adapter	30.95	
MJ-89 Modular mic switch	69.95	
TSU-7 CTCSS decoder unit	59.95	
UT-28S 50w 10m unit	339.95	289.95
UT-50S 50w 6m unit	379.95	329.95
UT-220S 25w 220 MHz unit	379.95	329.95
UT-440S 35w 440 MHz unit	339.95	289.95
UT-1200 10w 1.2 GHz unit	459.95	399.95
TM-733A 50/35w 2m/440 FM Xcvr/TTP/9600	799.95	CALL
$35 rebate from Kenwood - TM-733A thru 12/30/95		
DFK-3B 9' separate display cable kit	39.95	
DFK-4B 13' remote cable kit	60.95	
DFK-7B Deluxe 22' remote cable kit	99.95	
PG-5A Packet data cable	15.95	
TSU-8 CTCSS decoder	59.95	
MA-700 3db 2m/5.5db 440 ant w/duplexer	109.95	99.95
Larsen PO-K Roof mt, coax; MA-700	24.00	
Larsen PO-MM Magnet mt, coax; MA-700	31.70	
Larsen PO-TLM Trunk lip mt, coax; MA-700	27.30	
TM-241A 50w 2m FM Xcvr w/TTP mic	459.95	CALL
$30 rebate from Kenwood - TM-241A thru 12/30/95		
TM-331A 25w 220 FM Xcvr w/TTP mic	579.95	CALL
TM-441A 35w 440 FM Xcvr w/TTP mic	579.95	CALL
DTU-2 Digital paging unit	32.95	
KQT-8/TSU-6 Prog CTCSS decoder	49.95	
MC-44DM Extra multi-function TTP mic	79.95	
PG-4G Extra control cable .....Dm	22.95	6.95
TM-251A 50w 2m FM Xcvr/TTP/9600 baud	529.95	CALL
TM-451A 35w 440 FM Xcvr/TTP/9600 baud	599.95	CALL
MC-45DM Extra multi-function TTP mic	79.95	
ME-1 Memory expansion	39.95	
PG-5A Packet data cable	15.95	
TSU-8 CTCSS decoder	59.95	
MC-48B Up-down 8-pin TTP microphone	89.95	

Accessories: TH-A/B/2600A/3600A/2500/3500

DC-26 DC adapter; TR-2600A/3600A .....Dm	$ 37.95	14.95
RA-9B 220 BNC stubby duck .....Dm	18.95	2.95

Accessory for TH-225A/315A/415A/205AT

SC-27 Soft case for TH-225A w/PB-12 .....Dm	$ 19.50	95¢

Accessories for TH-75A/77A/25AT/26AT

BC-2 Wall charger for PB-10 .....Dm	$ 22.95	2.95
BT-6 6-AA battery case	29.95	
DC-1 DC adapter .....Dm	26.95	1.95
PG-3E Cig cord w/filter for DC-1	35.95	
DC-4 Mobile charger for PB-10 .....Dmf	20.95	1.95
KNB-5A 800ma 7.2v battery	63.95	
KNB-6A 1600ma 7.2v (2.5/2w) battery .Dmwf	97.50	
KNB-7A 800ma 12v (5w) batt (not 55AT)	87.95	
KQT-8/TSU-6 CTCSS encoder/decoder	49.95	
KSC-8/BC-10 Compact charger .....Dm	38.95	29.95
KVC-1/DC-5 Mobile cgr for PB-6/7/9 ..Dmwfv	33.95	9.95
KWR-1/WR-1 Water resistant bag .....Dwf	22.00	14.95
PB-5 200ma 7.2v (2.5/2w) battery .....Dmwv	59.95	6.95
SC-17 Soft case for PB-5 w/55AT .....Dm	22.95	95¢

Accessories for TH-26AT/46AT

SC-24 Soft case for PB-5/BT-7 .....Dm	$ 22.95	1.95
SC-26 Soft case for PB-7/8/9 .....Dm	22.95	1.00

Accessory for TH-27A/47A

SC-32 Soft case for PB-14 .....Dm	$ 21.95	4.95
TH-28A 2.5w 2m FM HT/batt/cgr/TTP	399.95	CALL
TH-48A 2w 440 FM HT/batt/cgr/TTP	469.95	CALL

Accessories for TH-28A/48A/78A

BC-14 Extra wall charger for PB-13 .....Dm	$ 24.95	
BC-15A Rapid charger for PB-13/14/17/18	119.95	109.95
BH-6 Swivel mount	39.95	
BT-8 AA alkaline battery case	29.95	
EMC-1 Lapel clip mic/ear piece	43.95	
HMC-2 VOX/boom mic headset	72.95	
KLF-3/PG-3F Cig cord w/filter	23.50	
ME-1 Memory expansion	39.95	
PB-13 700ma 7.2v battery	67.95	
PB-14 300ma 12v (5w) battery .....Dmwfv	90.95	69.95
PB-17 700ma 12v (5w) battery	99.95	

KENWOOD - continued

	Reg	Sale
PB-18 1100ma 7.2v battery	89.95	
PG-2W DC cable w/fuse	17.95	
PG-3H Cig lighter cord w/filter	36.95	
SC-33 Small soft case; 28A/48A	24.95	
SC-34 Large soft case; 28A/48A	24.95	
SC-35 Regular soft case; 78A	24.95	
SC-36 Large soft case; 78A	24.95	
SMC-32 Mini water resistant rt angle spkr/mic	52.95	
SMC-33 Speaker/mic w/remote control	65.95	
SMC-34 Spkr/mic w/vol cont & function keys	67.95	
WR-2 Water resistant bag	29.95	
TH-22AT 3w 2m FM HT/batt/cgr/TTP	339.95	CALL
$20 rebate from Kenwood - TH-22AT thru 12/30/95		
99 cent Cordura case - TH-22AT until gone!		
TH-42AT 2.5w 440 FM HT/batt/cgr/TTP	399.95	CALL
99 cent Cordura case - TH-42AT until gone!		
TH-79A(D) 2.7w 2m/440 FM HT/batt/cgr/TTP	629.95	CALL
$30 rebate from Kenwood - TH-79A(D) thru 12/30/95		
99 cent Cordura case - TH-79A(D) until gone!		
$4.99 Glove leather case - TH-79A(D) until gone!		
TH-79A(D)H 5w 2m/440 FM HT/batt/cgr/TTP	649.95	CALL
$30 rebate from Kenwood - TH-79A(D)H thru 12/30/95		
99 cent Cordura case - TH-79A(D)H until gone!		
$4.99 Glove/H leather case - TH-79A(D)H until gone!		
BH-6 Swivel mount	39.95	
BT-9 4-AA battery holder	29.95	
EMC-1 Lapel clip mic/ear piece	43.95	
HMC-2 VOX/boom mic headset	72.95	
KSC-8A Drop-in cgr; 25/26/75/77/22/79	26.95	
KSC-14 2-pack rapid charger	87.95	
PB-32 600ma 6v battery	66.95	
PB-33 1200ma 6v battery	89.95	
PB-34 600ma 9.6v (5w) battery	89.95	
PG-2W DC cable w/fuse	17.95	
PG-3H Cig lighter cord w/filter	36.95	
RA-3 2m BNC ⅜ wave telescopic ant Dmwv	25.95	
RA-5 2m ¼ wv/440 ⅝ wv BNC tele ant Dmw	32.95	
SC-37 Soft case; TH-22/42AT w/PB-30/32	24.95	
SC-39 Soft case; TH-22/42AT w/PB-33/34	24.95	
SC-41 Soft case; TH-79A w/PB-32	24.95	
SC-43 Soft case; TH-79A w/PB-33/34	24.95	
SMC-31 Speaker/mic/rt angle plug ....Dmfv	59.95	
SMC-32 Mini water resist rt angle spkr/mic	52.95	
SMC-33 Speaker/mic w/remote control	65.95	
SMC-34 Spkr/mic w/vol cont/function keys	67.95	
TSU-8 CTCSS decoder; TH-22/42AT	59.95	
WR-2 Water resistant bag; TH-22/42AT	29.95	

LARSEN (LAR)

27-31 MHz ANTENNAS

	Reg	Sale
NLA-27 10m ant only (no mount) ....Dfv	$ 38.90	24.95
NMO-27 10m ant only (no mount) ....Dmwv	32.25	28.95
NMO-27C 10m ant only (no mount)	33.50	29.95

47-54 MHz ANTENNAS

	Reg	Sale
NLA-50 6m ant only (no mount) ....Dw	$ 38.90	24.95
NMO-50C 6m ant only (no mount)	33.50	29.95

144-174 MHz ANTENNAS

	Reg	Sale
NMO-150 2m ant only (no mt), 3 db ....Df	$ 29.40	26.95
NMO-150B 2m black ant only (no mt), 3 db	33.20	29.95
NMO-150C 2m ant only (no mount), 3 db	30.70	27.95
OM-150-K 2m no gnd plane ant, 2 db ....Dwf	45.85	19.95

220-265 MHz ANTENNAS

	Reg	Sale
NLA-220 220 ant only (no mt), 3 db ....Dmwfv	$ 36.35	19.95
NMO-220 220 ant only (no mt), 3 db ....Dfv	31.10	25.95

LARSEN - continued

	Reg	Sale
NMO-220C 220 ant only (no mount), 3 db	30.00	26.95
OM-220-K 220 no gnd plane ant, 2 db ....Dw	47.50	19.95

440-460 MHz ANTENNAS

	Reg	Sale
NLA-440 440 ant only (no mt), 5 db ....Df	$ 34.85	19.95
NMO-440 440 ant only (no mt), 5 db ....Dmv	28.15	25.95
NMO-440B 440 black ant only (no mt), 5 db	35.80	32.95
NMO-440C 440 ant only (no mount), 5 db	29.30	26.95
OM-440-K 440 no gnd plane ant, 2 db ...Dmv	52.15	14.95
MM-2/70 2m/440 ¼ wave/2db mag mt ant	42.00	37.95
NMO-2/70B 2m/440 blk ant only (no mt), 2/4db	53.00	47.95
NMO-2/70C 2m/440 ant (no mount), 2/4db	48.50	43.95
NMO-2/70-SH 2m/440 ant (no mt), ¼ wv/2db	37.83	33.95
NMOQ-Spec 136-512 MHz ¼ wave ant (no mt)	9.70	
NMOQ-Spec-B 136-512 black ¼ wv ant (no mt)	13.20	
NMOQ-Spec-K 136-512MHz ¼ wv ¾" hole ant	23.20	
NMOQ-2/70-B 2m/440 ¼ wv cell look ant (no mt)	31.15	
NMO-1290B 1.2 GHz black ant only (no mt)	32.00	28.95
FB1-136 Base station 136-230 MHz ant	137.80	124.95

ON GLASS ANTENNAS

	Reg	Sale
KG-144-UD-PL 2m 3 db on glass antenna	$ 67.30	60.95
KG-220-UD-PL 220 3 db on glass antenna	67.30	60.95
KG-440-N 440 2.4 db N on glass ant ....Dfv	54.15	24.95
KG-440-PL 440 2.4 db on glass ant ....Dw	49.15	34.95
KG-440-UD-PL 440 2.4 db on glass antenna	54.70	49.95
KG-2/70-UD-PL 2m/440 2.5/4.5db on glass	91.80	82.95
KG-Reinstall Reinstall kit for KG-ants	5.20	

KULDUCKIES - For Hand-helds

	Reg	Sale
KD4-146 2m BNC Kulduckie	$ 17.30	
KD4-2/70 2m/440 BNC Kulduckie	27.70	
KD4-222 220 BNC Kulduckie	17.30	
KD4-445 440 short BNC Kulduckie ....Δmwv	17.30	6.95
KD14-445 440 ¼ wave BNC Kulduckie	17.30	
KD4-146-HQ 2m part helical, part ¼ wave BNC	21.50	
KD14-2M-HW 2m ½ wave BNC antenna	33.80	
KD14-440-HW 440 ½ wave BNC antenna	33.80	

ACCESSORIES & REPLACEMENT PARTS

	Reg	Sale
A-7 Adapter for NMO antenna on NLA mount	$ 8.33	
AD-2/70 100w 2m/440 duplexer	69.20	62.95
CRK NLA contact replacement kit ....Δmw	2.00	1.49
NLA-150-CO Extra coil for NLA-150 ....Dmw	28.85	14.95
NLA-220-CO Extra coil for NLA-220 ....Dwv	27.15	9.95
NLA-CAP Rain cap for NLA mount ....Dm	3.25	2.95
NLA-TLM Tnk lip mt, coax for NLA ant ....Dmw	26.40	14.95
NMO-150-CO Extra coil for NMO-150 ....Dw	20.25	18.95
NMO-220-CO Extra coil for NMO-220 ....Dmw	21.90	9.95
NMO-CAP Rain cap for NMO mount ....Dmfv	3.25	2.95
NMO-CAP-B Black rain cap for NMO mount	3.30	
NMO-K ¾" hole mt w/coax for NMO ant	13.50	
NMO-MM Magnet mt, coax for NMO ant	29.80	
NMO-TLM Tnk lip mt, coax; NMO ant ....Dmfv	23.60	
NMO-TLM-B Blk tnk lip mt, coax; NMO ant ...Dm	25.35	
NMO-TLP Low profile tnk lid mt, coax; NMO ant	26.50	
PO-K Roof mt, coax for SO-239 ant	24.00	
PO-MM Magnet mt, coax for SO-239 ant	31.70	
PO-TLM Trunk lip mt, coax for SO-239 ant	27.30	
RG-NLA Extra NLA rubber gaskets (3) ....Dm	2.10	1.95
RG-SS Extra super seal NMO gaskets (3)	3.00	
SPRING Shock spring	6.80	
TMB-34 Trunk mtg bkt for NMO antenna	4.70	
TMB-34B Black trunk mtg bkt for NMO ant	6.80	
TMB-38 Trunk mtg bkt for NLA ant ....Δf	4.70	2.95
TMB-38B Black trunk mtg bkt for NLA ....Δmf	6.80	2.95

LARSEN - continued

	Reg	Sale
W-154 Extra closed coil whip; 440 ant ..Δmfv	17.80	8.95
W-490 49" whip	9.50	
W-490B Black 49" whip	12.00	

MFJ ANTENNA TUNERS (MFJ)

	Reg	Sale
989C Dlx 3kw PEP w/roller inductor	$349.95	299.95
986 3kw PEP w/roller inductor	299.95	269.95
962C 1.5kw PEP/meter/switch/balun	249.95	229.95
949E/949EY 300w/meter/dummy/sw/balun/ps	139.95	129.95
948 300w/meter/switch/balun	129.95	119.95
941E 300w w/meter, switch, balun	109.95	99.95
945D 300w tuner w/meter	99.95	89.95
20 Mobile bracket for 945D	4.95	
901B Versa Tuner 200w ant tuner	69.95	
910 80-10m mobile antenna matcher	19.95	
16010 200w random wire tuner	39.95	
903 6m antenna tuner	49.95	
906 6m antenna tuner w/wattmeter	79.95	74.95
914 Auto tuner extender	59.95	
921 2m/220 300w PEP tuner/SWR/wattmeter	69.95	
924 440 MHz 300w PEP tuner/SWR/wattmeter	69.95	
934 300w tuner w/artificial ground	169.95	159.95

MEMORY KEYERS

	Reg	Sale
451 Dedicated CW keyboard w/memory	$ 99.95	94.95
451X Morse keyboard interface only	79.95	74.95
452 CW keyboard/keyer w/disp/keyboard	129.95	119.95
452X CW keyboard/keyer w/disp, no keyboard	99.95	89.95
498 Dlx CW keyboard/keyer w/disp/keyboard	179.95	169.95
498X Dlx CW keyboard w/disp, no keyboard	159.95	149.95
484C 12 25-char/25-100 char msgs ....Dm	149.95	69.95
490 492 keyer/Bencher paddle combination	164.95	149.95
490X 492 keyer for use w/Bencher or 564	109.95	99.95
564 Deluxe iambic paddle for 490X	49.95	
492 192 char menu driven memory keyer	99.95	89.95
80 8000 char memory expansion for 492	14.95	
492X Memory keyer w/8000 char expansion	114.95	104.95
78 Remote control for 492/492X	19.95	
493 32K char menu driven mem keyer	139.95	129.95
79 Remote control for 493	19.95	
551 IBM AT-101 keyboard for 493	39.95	
5409 493 9-pin serial port 6' cable	12.95	
5425 493 25-pin serial port 6' cable	12.95	

ELECTRONIC KEYERS

	Reg	Sale
407C Deluxe electronic keyer	$ 69.95	64.95
401C Econo keyer	49.95	

KEYER/PADDLES

	Reg	Sale
422C Keyer/Bencher paddle combination	$134.95	124.95
422CX Keyer only	79.95	74.95
1305 5vdc power supply	12.95	
564 Deluxe iambic paddle for 422BX	49.95	

COMPUTER INTERFACES

	Reg	Sale
1224 Interface	$ 99.95	94.95
1264 Tape software for VIC/C64; 1224 Δmf	19.95	12.95
1265 Disk software for VIC/C64; 1224	19.95	
1285 Software for IBM; 1224	19.95	
1225 Receive only interface	69.95	64.95
1264B Tape software; VIC/C64; 1225 ..Δmf	19.95	6.95
1265B Disk software; VIC/C64; 1225 Δmwf	19.95	4.95
1285B Software for IBM; 1225	19.95	
1270C Packet radio TNC2	119.95	109.95
47A Mailbox 32K mem board; 1270/1274	49.95	
47B Mailbox 128K mem board; 1270/1274	69.95	
47C Mailbox 512K mem board; 1270/1274	239.95	209.95
2400 2400 baud modem	89.95	
9600B 9600 baud modem	109.95	104.95

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MFJ - continued

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1270CT Turbo packet w/2400 baud	209.95	179.95
1270CQ Packet w/9600 baud modem	229.95	199.95
1276 Packet/Pactor controller	159.95	149.95
1276T Packet/Pactor Turbo controller	249.95	229.95
1278B Multi-mode controller w/Pactor	299.95	269.95
1278B/DSP Controller w/Pactor & DSP	379.95	349.95
45A 32K RAM IC only	14.95	
45B 128K RAM IC only ....Dw	29.95	
45C 512K RAM IC only ....Dmw	159.95	119.95
48 1278 upgrade	24.95	
48B 1278B upgrade	24.95	
48E 1278 packet encryption EPROM	29.95	
48X 1278 expanded mailbox firmware	24.95	
52 TNC2 deviation meter board	29.95	
56A Pactor/mailbox 32K board for 1278B	69.95	
56B Pactor/mailbox 128K board for 1278B	89.95	
56C Pactor/mailbox 512K board; 1278B	239.95	209.95
780 DSP data filter for 1278B	99.95	94.95
2400 2400 baud modem	89.95	
9600B 9600 baud modem	109.95	104.95
1278T Turbo controller/2400 baud ....Dm	359.95	249.95
1278BT Turbo controller/2400 baud/Pactor	369.95	339.95
1282 C64 starter pack	24.95	
1282B Multicom package; C64/128	39.95	
1282BD Multicom 64 disk only	29.95	
1283 Tape software; C64 & VIC-20 ....Δfv	24.95	18.95
1284 5¼" IBM starter pack	24.95	
1284D 1284 disk only	14.95	
1284M 3½" IBM starter pack	24.95	
1284MD 1284M disk only	14.95	
1284W MFJCOM for Windows	29.95	
1287 Macintosh starter pack	24.95	
1287B Mac multicom starter pack	49.95	
1287D 1287 disk only	14.95	
1287BD 1287B disk only	39.95	
1289 5¼" multicom software for IBM	59.95	
1289D 1289 disks only	49.95	
1289M 3½" multicom software for IBM	59.95	
1289MD 1289M disks only	49.95	
1214PC Multimode interface for IBM	149.95	139.95
59 1214 5¼" software upgrade	29.95	
59M 1214 3½" software upgrade	29.95	
40B TNC2 upgrade 32K/RAM	29.95	
40C TNC2 upgrade 32K	19.95	
40CX TNC2 upgrade; expanded RAM mailbox	19.95	
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44X Scope tuning adapter; 1278 & others	49.95	
52B FM deviation/temp/volt meter for TNC	39.95	
1271 Packet card for C64/128	49.95	
1272B TNC to microphone interface	39.95	
1272BX TNC/mic switch; PK-232	39.95	
1272BYH TNC/mic switch; KAM HF	39.95	
1272BYV TNC/mic switch; KAM VHF	39.95	
1272BZ TNC/mic switch; PK-88	39.95	
1272M TNC/mic RJ-45 switch; MFJ/PK-900	39.95	
1272MX TNC/mic RJ-45 switch; PK-232	39.95	
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1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3	39.95	
1272MZ TNC/mic RJ-45 switch; PK-88	39.95	
1273 Packet tuning indicator ....Dmwfv	49.95	19.95

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722 SSB/CW notch filter	$ 79.95	74.95
752C Dual tunable SSB/CW filter	99.95	94.95
781 DSP filter for any TNC or controller	129.95	119.95
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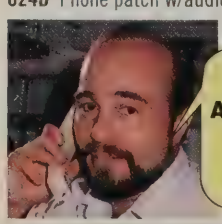

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250X 2kw PEP dummy load, less oil	29.95	
260C 300w 0-650 MHz dry dummy load	29.95	
260CN 300w 0-650 MHz type N dry dummy	34.95	
264 1.5kw 0-650 MHz dry dummy load	59.95	
264N 1.5kw 0-650 MHz type N dry dummy	69.95	

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815B 160-6m cross-needle SWR/wattmeter	69.95	
816 1.8-30 MHz toroidal SWR/wattmeter	29.95	
817 2m/440 cross needle meter	79.95	74.95
840 2m 5w wattmeter/dummy load for HT	19.95	
841 2m 5w in-line HT wattmeter/SWR	39.95	
860 1.8-60 MHz cross-needle meter	39.95	
862 2m/220/440 cross-needle meter	49.95	
864 1.8-60MHz/2m/220/440 cross needle meter	79.95	

SHORTWAVE ACCESSORIES

306 Car radio SWL converter	$ 79.95	74.95
956 LW/MW/SW preselector/tuner	39.95	
959B Receiver ant tuner w/preamp	99.95	
1020A .3-30 MHz indoor active rcv ant ...Dmf	79.95	74.95
1020B .3-30 MHz indoor active rcv ant	79.95	
1022 300KHz-200MHz active rcv antenna	39.95	
1024 .05-30 MHz outdoor active rcv ant	129.95	119.95
1040B Deluxe receiver preselector	99.95	
1045B Receiver preselector ....Dmfv	69.95	54.95
1045C Receiver preselector	69.95	64.95

ACCESSORIES

1305 5vdc 300ma adapter	$ 12.95	
1312 12vdc 300ma adapter, 2.5mm plug	12.95	
1312B 12vdc 300ma adapter, 2.1mm plug	12.95	
1315 12vdc 500ma adapter	14.95	
30 Golden Classics book	9.95	
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208 2m SWR analyzer	79.95	74.95
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212 MatchMaker tune up device	79.95	
217 SWR analyzer, 30-50 MHz	79.95	69.95
218 SWR analyzer, 150-170 MHz	79.95	69.95
219 SWR analyzer, 440 MHz	99.95	89.95
219N SWR analyzer, 440 MHz w/type N	99.95	89.95
249 1.8-170 MHz SWR analyzer/LCD counter	219.95	199.95
68 249 to 259 upgrade kit	29.95	
259 1.8-170 MHz SWR analyzer/RF res meter	239.95	219.95
29 Padded carrying pouch; 209/249/259	19.95	
29B Pouch with window; 209/249/259	24.95	
66 1.8-30/30-170 MHz dip coils; 249/259	19.95	
280 Mobile compact speaker	19.95	
283 Speaker/mic, split jack; Alinco	24.95	
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285W Mini spkr/mic for Icom W2A	24.95	
286 Speaker mic; Kenwood	24.95	
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287L Mini spkr/mic L for Kenwood	24.95	
323 Keep-it-up battery maintainer	59.95	
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MFJ - continued

	Reg	Sale
411 Personal Morse Code Tutor	79.95	74.95
432 Voice Memory Keyer	109.95	99.95
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5162 Receiver cable for 462B	4.95	
557 Deluxe code oscillator w/key	24.95	
701 Toroid RFI filters ....pack of 4	14.95	
704 1kw low-pass filter	39.95	
850 AC line voltage monitor	19.95	
912 W9INN remote balun	39.95	
916 2m/440 duplexer	29.95	
931 Artificial ground unit	79.95	74.95
1112 Multiple DC outlet	29.95	
1116 Dlx multiple DC outlet	44.95	
1118 High current multiple DC outlet	69.95	
1202 Contest Connie voice keyer/interface	149.95	134.95
1213 Interface for JVFAX/HamComm software	29.95	
1266 C64 disk code tutor program	19.95	
1267 C64 cart code tutor program ....Dv	29.95	12.95
76 1266/67 interface brd; kyr/keyboard ..Δmfv	19.95	6.95
1268 IBM PC memory keyer	49.95	
1269 IBM code tutor	19.95	
1281 IBM Easy-DX logging program	39.95	
1286 Gray Line DX Advantage prog; IBM	29.95	
1288 Picture passing packet soft; IBM ....Dm	9.95	1.95
1292 Video digitizer for IBM	199.95	179.95
1610 Novice theory tutor software for IBM	29.95	
1611 Technician theory tutor software; IBM	29.95	
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1613 Advanced theory tutor software; IBM	29.95	
1614 Extra theory tutor software for IBM	29.95	
1615 No-code theory tutor software for IBM	49.95	
1621 40-10m 54" portable ant w/tuner	79.95	74.95
1630 Novice theory tutor software for Mac	29.95	
1631 Technician theory tutor software; Mac	29.95	
1632 General theory tutor software for Mac	29.95	
1633 Advanced theory tutor software; Mac	29.95	
1634 Extra theory tutor software for Mac	29.95	
1635 No-code theory tutor software for Mac	49.95	
1680I Windows software package; Icom	109.95	99.95
1680K Windows software package; Kenwood	109.95	99.95
1680Y Windows software package; Yaesu	109.95	99.95
1681 Log Windows software	69.95	
1682 Packet Windows software	29.95	
1683I Rig Windows software for Icom	29.95	
1683K Rig Windows software for Kenwood	29.95	
1683Y Rig Windows software for Yaesu	29.95	
5383I Icom Xcvr interface cable	49.95	
5383K Kenwood Xcvr interface cable	49.95	
5383Y Yaesu interface cable, std 6-pin DIN	49.95	
5383YB Yaesu interface cable, mini 6-pin DIN	49.95	
1700B Combination ant/xmtr switch	69.95	
1701 6-position coax switch	39.95	
1702B 2-position coax switch	21.95	
1702BN 2-pos 1.1 GHz type N switch	31.95	
1704 4-pos 500 MHz switch/lightning protect	59.95	
1704N 4-position type N switch	69.95	
1710 2m ⅜ wave telescopic antenna	9.95	
1712 2m/440 telescopic antenna	14.95	
1714 2m ½ wave telescopic antenna	16.95	
1716 2m/440 duck for HT	16.95	
1717 Gain 2m/440 duck for HT	19.95	
1718 2m shorty duck for HT	12.95	
1724B 2m/440 magnet mt antenna	14.95	
1728B 2m ⅝ wave mag mt ant/PL259/BNC	24.95	
1729 2m/440 magnet mt antenna	29.95	
1730 2m pocket roll-up vertical ant	14.95	
1734 2m/440 2.6/6.3db glass mt antenna	39.95	
1738 2m 2.6db glass mt antenna	29.95	
94 Remount kit for 1734/1738	7.95	
1740 2m ¼ wave ground plane ant	12.95	
1750 2m ⅝ wave ground plane ant	19.95	
1752 220 ⅝ wave ground plane ant	19.95	
1754 2m/440 ground plane antenna	24.95	
1763 2m 3el portable beam	39.95	
1764 2 & 6m dual ⅝ super gain base ant	44.95	
1765 Direct feed pwr splitter/harness .Δmwf	29.95	14.95
1766 Stacked 2m dual ⅝ base antenna	109.95	99.95
1768 2m/440 beam antenna	69.95	

MFJ - continued

	Reg	Sale
1778 G5RV 160-10m 102' ant (needs tuner)	29.95	
1780 14-30 MHz 150w 2 'x 2' box loop ant	229.95	199.95
1782 Super Hi-Q 10-30MHz loop/basic control	269.95	239.95
1786 Super Hi-Q 10-30MHz loop/dlx control	299.95	269.95
1312B 12vdc 300ma adapter; 1782/1786	12.95	
1792 80/40m 33' vertical antenna	159.95	139.95
1793 80/40/20m vertical antenna	179.95	159.95
1796 40/20/15/10/6/2m 10' vertical ant	199.95	179.95
1798 80/40/30/20/17/15/12/10/6/2m 20' vert	269.95	249.95
1824BB Cell look alike BNC scanner ant	19.95	
1824BM Cell look Motorola plug scanner ant	19.95	
1828B Magnet mt BNC scanner antenna	29.95	
1828M Mag mt Motorola plug scanner ant	29.95	
1864 Base scanner antenna w/preamp	79.95	69.95
2040 Repeater controller .....Dwv	449.95	229.95
3036 The Packet Radio Operators book	12.95	
3101 Fox Hunt Adventure book	7.95	
3210 Novice license guide	7.95	
3211 Tech Plus license guide	7.95	
3212 No code tech license guide	14.95	
3213 General license guide	7.95	
3214 Advanced license guide	7.95	
3215 Extra license guide	7.95	
3301 Troubleshooting Antenna & Feedlines book	12.95	
3302 73 Dipole and Long-Wire Antennas	12.95	
3303 73 Vertical, Beam, and Triangle Ants	12.95	
3304 Technician Antenna Handbook ....Dmwv	9.95	
3502 Solid State QRP Projects	12.95	
3504 FET Principles, Experiments & Projects	16.95	
5024 MFJ TNC - Ico/Yae/Ali/RS HT cable	14.95	
5024X PK-232 - Ico/Yae/Ali/RS HT cable	14.95	
5024YV KAM VHF/KPC3 - Ico/Yae/Ali/RS HT cbl	14.95	
5024Z PK-88 - Ico/Yae/Ali/RS HT cable	14.95	
5026 MFJ TNC - Kenwood HT cable	14.95	
5026X PK-232 - Kenwood HT cable	14.95	
5026YV KAM VHF/KPC3 - Kenwood HT cable	14.95	
5026Z PK-88 - Kenwood HT cable	14.95	
5080 MFJ TNC - Yaesu 8-pin cable	14.95	
5080M MFJ TNC - Yaesu 8-pin modular	14.95	
5080MX PK-232 - Yaesu 8-pin modular	14.95	
5080MYV KAM VHF/KPC3 - Yaesu 8-pin mod	14.95	
5080MZ PK-88 - Yaesu 8-pin modular	14.95	
5080X PK-232 - Yaesu 8-pin cable	14.95	
5080YV KAM VHF/KPC3 - Yaesu 8-pin cable	14.95	
5080Z PK-88 - Yaesu 8-pin cable	14.95	
5082 Open end - 8-pin mic cable	9.95	
5084 MFJ TNC - Icom 8-pin cable	14.95	
5084M MFJ TNC - Icom 8-pin modular	14.95	
5084MX PK-232 - Icom 8-pin modular	14.95	
5084MYV KAM VHF/KPC3 - Icom 8-pin mod	14.95	
5084MZ PK-88 - Icom 8-pin modular	14.95	
5084X PK-232 - Icom 8-pin cable	14.95	
5084YH KAM HF port - Icom 8-pin cable	14.95	
5084YV KAM VHF/KPC3 - Icom 8-pin cable	14.95	
5084Z PK-88 - Icom 8-pin cable	14.95	
5086 MFJ TNC - Kenwood/Alinco 8-pin cable	14.95	
5086M MFJ TNC - Kenwood 8-pin modular	14.95	
5086MX PK-232 - Kenwood 8-pin modular	14.95	
5086MYV KAM VHF/KPC3 - Ken 8-pin mod	14.95	
5086MZ PK-88 - Kenwood 8-pin modular	14.95	
5086X PK-232 - Kenwood/Alinco 8-pin cable	14.95	
5086YH KAM HF port - Ken/Ali 8-pin cable	14.95	
5086YV KAM VHF/KPC3 - Ken/Ali 8-pin cable	14.95	
5086Z PK-88 - Kenwood/Alinco 8-pin cable	14.95	
5205 5-pin DIN open end cable	4.95	
5215 5-pin DIN patch cable	9.95	
5222 Open end - Alinco split HT cable	9.95	
5224 Open end - Ico/Yae/Ali/RS HT cable	9.95	
5226 Open end - Kenwood HT cable	9.95	
5268 Open end - modular phone plug cable	9.95	
5412 IBM printer cable	9.95	
5413 RS-232 cable DB-25M-252	9.95	
5414 RS-232 cable DB-25M-9F2	9.95	
5803/10 3' coax jumper cable	4.95	
8100K Shortwave regenerative Rcvr kit	59.95	
8100W Shortwave regenerative Rcvr wired	79.95	72.95
8400K 2m receiver kit	79.95	72.95
8400W 2m receiver wired	99.95	89.95

MFJ - continued

	Reg	Sale
8621 VHF data radio w/145.01 MHz	119.95	109.95
8621X1 APRS ready VHF data radio/145.79MHz	139.95	129.95
4110 Portable AC power supply	39.95	
5100 Data radio cable - MFJ/TAPR	14.95	
5100X Data radio cable - PK-232	14.95	
5100YH Data radio cable - KPC-9612	14.95	
5100YV Data radio cable - KAM/KPC-3	14.95	
5100Z Data radio cable - PK-88	14.95	
9015 5w 15m CW Xcvr	189.95	169.95
9017 5w 17m CW Xcvr	189.95	169.95
9020 5w 20m CW Xcvr	189.95	169.95
9030 5w 30m CW Xcvr	189.95	169.95
9040 5w 40m CW Xcvr	189.95	169.95
27 Handle for CW station	4.95	
412 Plug-in Curtis keyer	39.95	
726 Plug-in audio filter	29.95	
971 200w portable ant tuner w/meter	89.95	84.95
1770 Portable 15m dipole	34.95	
1771 Portable 17m dipole	34.95	
1772 Portable 20m dipole	34.95	
1773 Portable 30m dipole	34.95	
1774 Portable 40m dipole	34.95	
4112 Portable power pack	49.95	
4114 Rechargeable power pack	69.95	64.95
9115B 9015 Xcvr/971 tuner/4114 ps/1770 ant	339.80	299.95
9117B 9017 Xcvr/971 tuner/4114 ps/1771 ant	339.80	299.95
9120B 9020 Xcvr/971 tuner/4114 ps/1772 ant	339.80	299.95
9130B 9030 Xcvr/971 tuner/4114 ps/1773 ant	339.80	299.95
9140B 9040 Xcvr/971 tuner/4114 ps/1774 ant	339.80	299.95
9420X 12w 20m SSB Xcvr w/mic	239.95	219.95
9406X 6m SSB Xcvr w/mic	259.95	239.95
415 SSB Xcvr CW adaptor	39.95	
971 200w HF portable ant tuner w/meter	89.95	84.95
4110 Portable AC power supply	39.95	
4114 Rechargeable power pack	69.95	64.95
416 CW adapter for 9406X	39.95	
1776 6m dipole for 9406X	34.95	

MAGELLAN (MAG)

GPS-2000 GPS receiver	$199.95
Meridian XL GPS/track plotter/detach ant/case	299.95

MALDOL (MAL)

AH-209S 2m/440 3" duck	$ 18.99
ARD-5B 2m/440 0/3.8db 19.6" mobile ant	59.99
ARD-6 2m/440 2.6/4.9db 26.8" mobile ant	70.99
ARD-6B Black 2m/440 2.6/4.9db 26.8" mob	70.99
ARD-10 2m/440 3/5.5db 34.8" mobile ant	70.99
ARD-10B Black 2m/440 3/5.5db 34.8" mob	70.99
ARD-12 2m/440 4.3/6.8db 48.8" mobile ant	97.99
ARD-12B Black 2m/440 4.3/6.8db 48.8" mob	97.99
ARD-16 2m/440 5/7.7db 65.6" mobile ant	99.99
ARD-16B Black 2m/440 5/7.7db 65.6" mob	99.99
ARS-50 6m 1/4 wave 61.2" mobile antenna	74.99
ARS-146 2m 4.1db 56" mobile antenna	77.99
ARS-146B Black 2m 4.1db 56" mobile ant	77.99
ARS-440 440 5.5db 38.4" mobile antenna	67.99
ARS-440B Black 5.5db 38.4" mobile ant	67.99
EX-110 2m/440 3/5.5db 37.8" mobile ant	64.99
EX-110B Black 2m/440 3/5.5db 37.8" mob	64.99
EX-111 2m/440 3.6/6db 44" mobile antenna	77.99
EX-111B Black 2m/440 3.6/6db 44" mobile	77.99
FA-50 2m/440 2.15/3.2db 18.8" mag mt ant	51.99
FR-30 2m/440 15" flexible telescopic whip	52.99
HS-702S 2m/440 0/3.2db 17.6" duck	19.99
HS-FOX727 2m/440 9.5/11.15db 3/5el beam	119.99
MK-30H Hatch/trunk power mount	164.99
MK-30K Roofrail/carrier power mount	164.99
RG-4M 13' coax & connector	17.99

MIRAGE (MIR)

	Reg	Sale
A-1015G 6m FM/SSB 10/150w amp/preamp	$389.00	349.95
A-1035G* 6m FM/SSB 10/350w 28v amp/pre	659.00	589.95
B-23 2m FM/SSB 2/30w amplifier	129.00	119.95
B-23G 2m FM/SSB 2/30w amp/preamp	169.00	154.95
B-34 2m FM 2/35w amplifier	79.00	
B-34G 2m FM/SSB 3.5/35w amp/preamp	99.00	
B-215G 2m FM/SSB 2/150w amp/preamp	379.00	339.95
B-108G 2m FM/SSB 10/80w amp/preamp	229.00	204.95

MIRAGE - continued

	Reg	Sale
B-1016G 2m FM/SSB 10/160w amp/preamp	379.00	339.95
B-1030G 2m FM/SSB 10/300w amp/preamp	689.00	619.95
B-1060G* 2m FM/SSB 10/600w 28v amp/pre	1094.00	989.95
B-2516G 2m FM/SSB 25/160w amp/preamp	299.00	269.95
B-2530G 2m FM/SSB 25/300w amp/preamp	689.00	619.95
B-2560G* 2m FM/SSB 25/600w 28v amp/pre	1094.00	989.95
B-5016G 2m FM/SSB 50/160w amp/preamp	299.00	269.95
B-5030G 2m FM/SSB 50/300w amp/preamp	669.00	599.95
B-5060G* 2m FM/SSB 50/600w 28v amp/pre	1094.00	989.95

*Requires 28 volts; information on combining power supplies included in operations manual.

C-22 220 FM/SSB 2/20w amplifier	129.00	119.95
C-22G 220 FM/SSB 2/20w amp/preamp	169.00	154.95
C-211G 220 FM/SSB 2/110w amp/preamp	339.00	299.95
C-106G 220 FM/SSB 10/60w amp/preamp	239.00	214.95
C-1012G 220 FM/SSB 10/120w amp/preamp	339.00	299.95
C-1022G 220 FM/SSB 10/220w amp/preamp	655.00	589.95
C-2512G 220 FM/SSB 25/120w amp/preamp	315.00	289.95
C-2522G 220 FM/SSB 25/220w amp/preamp	655.00	589.95
C-5012G 220 FM/SSB 50/120w amp/preamp	334.00	299.95
C-5022G 220 FM/SSB 50/220w amp/preamp	639.00	569.95
D-15N 430 FM/SSB/ATV 2/18w type N amp	189.00	169.95
D-26N 440 FM/SSB 2/60w type N amplifier	269.00	244.95
D-1010N 440 FM/SSB 10/100w type N amp	395.00	354.95
D-3010N 440 FM/SSB 30/100w type N amp	365.00	329.95
D-100-ATVN 430 ATV 1/52w type N amp	414.00	369.95
D-1010-ATVN 430 ATV 10/100w type N amp	414.00	369.95
RC-1* Remote control head w/18' cable	45.00	

*Not for B-23/C-22/D-26

The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors

A-1015NR 6m FM 2/80w type N amplifier	$599.00	539.95
A-1015R 6m FM 2/80w SO-239 amplifier	579.00	519.95
B-215NR 2m FM 1/110w type N amplifier	579.00	524.95
B-215R 2m FM 1/110w SO-239 amplifier	559.00	504.95
B-1016NR 2m FM 2/120w type N amplifier	619.00	559.95
B-1016R 2m FM 2/120w SO-239 amplifier	599.00	539.95
B-2516NR 2m FM 12/120w type N amplifier	569.00	519.95
B-2516R 2m FM 12/120w SO-239 amplifier	549.00	499.95
C-211NR 220 FM .5/80w type N amplifier	649.00	584.95
C-211R 220 FM .5/80w SO-239 amplifier	629.00	564.95
C-1012NR 220 FM 5/90w type N amplifier	649.00	584.95
C-1012R 220 FM 5/90w SO-239 amplifier	629.00	564.95
C-2512NR 220 FM 15/90w type N amplifier	615.00	559.95
C-2512R 220 FM 15/90w SO-239 amplifier	595.00	539.95
D-1010NR 440 FM 4/80w type N amplifier	654.00	589.95
D-3010NR 440 FM 12/80w type N amplifier	625.00	564.95
D-100-ATVN-R 430 ATV 1/40w type N amp	654.00	589.95
D-1010-ATVN-R 430 ATV 4/80w type N amp	654.00	589.95

PREAMPS

KP-1/10M 10m in shack preamp	$139.00	124.95
KP-1/6M 6m in shack preamp	139.00	124.95
KP-1/2M 2m in shack preamp	139.00	124.95
KP-1/220 220 in shack preamp	139.00	124.95
KP-1/440 440 in shack preamp	139.00	124.95
KP-2/10M 10m mast mount preamp	195.00	174.95
KP-2/6M 6m mast mount preamp	195.00	174.95
KP-2/2M 2m mast mount preamp	195.00	174.95
KP-2/220 220 mast mount preamp	195.00	174.95
KP-2/440 440 mast mount preamp	195.00	174.95

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Info also available on the **AES®** BBS
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MIRAGE - continued

	Reg	Sale
WATTMETERS		
MP-1 160-10m 25/200/2kw PEP wattmeter ..	$235.00	209.95
MP-2 6 & 2m 50/500/1.5kw PEP wattmeter ..	235.00	209.95
MP-3 420-450 5/50/500w PEP wattmeter	265.00	239.95
MP-4 1.2 GHz 1/10/100w PEP wattmeter	279.00	259.95

NCG (NCG)

BB-516 Motorcycle intercom set	$ 89.95	
BJP-514 Motorcycle earph/mic; Ali/Ico/Sta/Yae	69.95	
BJP-514K Motorcycle earphone/mic; Kenwood	69.95	
MH-900P Earpiece/bm mic/PTT; all HT but Ken	39.95	
MH-900PK Earpiece/boom mic/PTT; Ken HT ...	39.95	
MP-28 Boom mic/headset/PTT; all HT but Ken	39.95	
MP-28K Boom mic/headset/PTT for Ken HT ...	39.95	
Power Pocket 12v 2AH lead acid belt batt/cgr	66.95	

NAVAL (NAV)

HTS-3 5-15vdc amplified speaker	$ 34.95	
MK-303 Earphone/PTT/mic for Icom HT's	14.95	

NEW WAVE (NEW)

Adventurer 12' extended Portaple alum mast m	$109.95	
Traveler 19' extended Portaple alum mast .m	124.95	
Rover 26' extended Portaple alum mast .....m	149.95	
Expeditioner 33' extended Portaple alum mast m	174.95	
Explorer 40' extended Portaple alum mast m	199.95	
Big Foot Welded, unpainted park-on mt ..m	119.95	

NICAD BATTERIES

GE NICADS (GEX)

2GE3A AAA size nicad .....Δm,pair	$ 6.81	95¢
BC-8B/Charge 8 Charger for 8 nicads .....Δm	21.99	6.95

JBRO NICADS (JAB)

J/CM-2 Replacement inserts; Ico BP-2 ...Δmf	$ 24.25	16.95
J/CM-5 Replacement inserts; Ico BP-5 .....Δf	30.50	19.95
J/CM-7F 13.2v 450ma batt for Icom .....Δmv	72.70	34.95

NORCOMM (NOR)

NC-401 Sub-miniature DTMF decoder .....m	$ 59.95	

NYE VIKING (NYE)

ANTENNA TUNERS AND ACCESSORIES

MBV-A 3kw tuner with ant switch & meters ..	$830.00	729.95
MBV-B As MBV-A, without meters	689.00	599.95
020-001 2kw low-pass filter	49.00	

PHONE PATCHES

047-001 Phone patch w/4-pin, no spkr Δmfv	$157.50	99.95
047-003 Phone patch w/8-pin & spkr .....Δw	187.50	144.95

MASTER KEY

330-001 Black enamel base w/cable, plug ...	$ 65.00	

HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS

320-001 No shorting switch	$ 31.00	
320-003 As above, w/shorting switch	36.00	
322-001 Brass hardware, no switch	31.00	
322-003 As above, w/shorting switch	36.00	

STANDARD SPEED-X KEYS

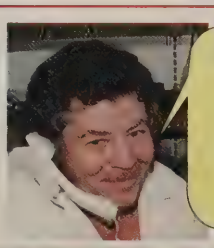
310-001 Black, no shorting switch	$ 28.40	
310-003 As above, w/shorting switch	33.50	
312-001 Brass arm, no shorting switch	28.60	
312-003 As above, w/shorting switch	33.50	
315-003 Brass oval key, steel base, short sw	63.95	

KEY ACCESSORIES

013-001 Navy knob	$ 15.50	
300-001 Black plastic base for keys .....Dmf	8.00	1.95

CODE PRACTICE SETS (BUZZER)

404-001 Code practice set, no key .....Δmwfv	$ 24.50	6.95
404-002 Code practice set w/hand key .....Δf	51.87	29.95



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Oak Bay Technologies (OAK)

	Reg	Sale
AM-101B BNC duck window mount	$ 24.95	
CA-232HH Handheld packet cable	34.95	
CA-232U Universal packet cable	34.95	
LP-11P 1.8-30 MHz 1kw low-pass filter	69.95	
LP-50 1.8-54 MHz 1kw low-pass filter	69.95	
PS-101 Heavy duty DC power strip	79.95	

Optoelectronics (OPT)

8040 Multifunction 10-digt ctr/timer ..Dmwfv	$679.00	549.95
8040DLX 10-dig counter/.05ppm oven/nicads	999.00	
Cub 1 MHz - 2.8GHz 9-digit mini-counter	149.00	
CX-12AR RS-232 interface converter	99.00	
R-10 30-2000MHz FM communications Interceptor	299.00	
CF-802 Band pass filter/amp; 825-845MHz	149.00	
Scout/400/Scout 10-2800MHz freq rec/counter	449.00	
Clipmate Windshield mount for Scout/400 .	25.00	
DB-32 Mini 1.75" antenna for Scout/400 ...	29.00	
Spectrum FCC database CDROM/Scout prog	39.00	
SSB-220A SSB/gen purpose 3GHz bench ctr ..	399.00	
Antenna Pack 2 5 tuned ants; 26MHz-1GHz .	99.00	
BHP-800 High pass receiving filter	40.00	
BLP-70 Low pass receiving filter	36.00	
CB-232 PC interface cable	39.00	
CC-30 Vinyl case for R-10//Scout/400	15.00	
N-100 FM broadcast band notch filter	99.00	
Optolog Software for 8040/SSB-220A	25.00	
P-30 1X/10X switchable probe; counter/scope	35.00	
TA-100S 100-600MHz telescoping whip ant .	12.00	

OUTBACKER (OUT)

OB-8 300w PEP 6' 75-10m 8-band mobile ant ..	$259.00	
OB-8HP 500w PEP 6' 75-10m 8-band mob ant .	289.00	
OB-S8 8-band mobile ant w/storage bag	289.00	
OB-8TRI 3-pc 300w PEP 6' 8-band port ant ..	319.00	
OB-JR8 150w PEP 4' 75-10m 8-band mob ant .	229.00	
Perth 7.5' 75/40/30/20/17/12/10m mobile ant	274.00	
Perth Plus 75-10m plus 6m/2m mobile ant ..	289.00	
OB-M 300w PEP 6' 75/40/20/17/10m/HF marine .	389.00	
OB-SB ⅜-24 spring and ½" hole base	82.00	
Diamond **K-400-3/8C** ⅜-24 trunk mt, 6' coax	69.95	
Diamond **C-110** 10' ext cable; K-400-3/8C .	14.95	

Palomar Engineers (PAL)

FER-2 RF ferrite toroid kit	$ 18.00	
LA-1 Loop amplifier; matches loop to Rcvr	99.95	
5-15 MHz plug-in loop (HF-1)	89.95	
1.6-5 MHz plug-in loop (160m, 80m)	89.95	
.55-1.6 MHz plug-in loop (AM broadcast)	89.95	
150-550 KHz plug-in loop (LF, 1750m)	89.95	
40-150 KHz plug-in loop (WWVB, Loran)	89.95	
10-40 KHz plug-in loop (Omega) .....Δwf	89.95	59.95
M-840 Bar graph HF auto SWR/power meter ..	199.95	189.95
PS-95 AC adapter for M-835/840	15.00	
MDB-2 Magnetic dipole receiving balun	39.95	
MLB-1 Magnetic longwire receiving balun	39.95	
MSB-3 Magnetic switch receiving balun	135.00	129.95
P-405 1.8-54MHz 20db 9v Rcv preamp Dmwfv	149.95	89.95
P-408 1.8-54MHz 20db AC Rcv preamp ..Dmwf	159.95	109.95
P-410X 160-6m 20 db Xcvr preamp	179.95	169.95
P-412X 160-6m 20 db mobile Xcvr preamp ..	179.95	169.95
PF-300 SC audio filter .....Dmfv	159.95	119.95
PK-200 Jones dual-paddle key	170.00	159.95
PK-200B Brass Jones dual-paddle key	190.00	179.95
PK-205 Jones straight key	150.00	139.95
PT-340 Tuner-Tuner (use with ant tuner)	99.95	
RFI-3 RF interference kit	18.00	
RX-100 1-100 MHz RX noise bridge	79.95	
SMB-5 SmartBridge prog for AT computers	29.95	
SB-4 2kw 1.7-30 MHz 4:1 balun w/SO-239 ...	79.95	
VLF-A VLF converter; 10-500 KHz to 80m	79.95	
VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz	79.95	

PANASONIC (PAN)

RF-B45 Compact FM/LW/MW/SW port Rcvr	$199.95	169.95

PENETROX (PEN)

Penetrox A 4 oz tube for antennas	$ 7.95	

PERCON (PEC)

Spectrum FCC database CDROM	$ 29.95	

PERIPHEX (PER)

BP-3 8.4v 350ma battery for Icom	$ 39.00	
BP-7S 13.2v 1200ma battery for Icom	65.00	
BP-8 8.4v 1400ma battery for Icom	75.00	
BP-8S 9.6v 1400ma battery for Icom	65.00	
BP-83S 7.2v 800ma battery for Icom	43.50	
BP-84S 7.2v 1400ma battery for Icom .....†	63.00	44.00
BP-85S 12v 800ma battery for Icom	76.00	
BP-114S 12v 800ma battery for Icom	79.00	
BP-132 12v 600ma battery for Icom	54.00	
BP-132A 12v 600ma battery for Icom	54.00	
SAT Internal 7.2v 300ma int batt; IC-2SAT ...	25.00	
BP-3 Insert 8.4v 270ma insert; Icom BP-3 ...	18.95	
BP-8 Insert 8.4v 800ma insert; Ico BP8 Dmwfv	29.50	
CNB-152 12v 600ma battery for Standard	58.50	
CNB-153 7.2v 1100ma battery for Standard ..	54.50	
EBP-22S 12v 800ma battery for Alinco	65.00	
EBP-24S 7.2v 1500ma battery for Alinco ....†	62.00	39.00
FNB-11 12v 800ma battery for Yaesu	58.50	
FNB-12 12v 600ma battery for Yaesu	54.50	
FNB-14 7.2v 1100ma battery for Yaesu	47.75	
FNB-14S 7.2v 1400ma battery for Yaesu	59.75	
FNB-26 7.2v 1100ma battery for Yaesu	60.00	
FNB-26S 7.2v 1400ma battery for Yaesu	65.00	
FNB-27 12v 600ma battery for Yaesu	60.00	
FNB-27S 12v 800ma battery for Yaesu	65.00	
FNB-33 4.8v 1400ma battery for Yaesu .....†	53.25	42.50
FNB-35 7.2v 600ma battery for Yaesu	49.00	
FNB-38 9.6v 650ma battery for Yaesu	66.90	
PB-1 12v 1000ma battery for Kenwood	64.00	
PB-7S 7.2v 1400ma battery for Kenwood	59.00	
PB-8S 12v 800ma battery for Kenwood	59.00	
PB-13S 7.2v 1200ma battery for Kenwood	49.75	
PB-14S 12v 400ma battery for Kenwood	60.00	
PB-17 12v 800ma battery for Kenwood	49.95	
PB-18 7.2v 1400ma battery for Kenwood	49.25	
PB-25S/26S 8.4v 1400ma battery; Kenwood .	65.00	
PB-33 6v 1200ma battery for Kenwood .....†	49.00	40.00
PB-34 9.6v 600ma battery for Kenwood	54.00	
Santec ST-142 9.6v 600ma battery; ST-142 ..	23.95	

PHILIPS (PHI)

U-105 Light duty rotor	$ 99.90	69.95
TB-105 Thrust bearing	18.25	

PICQUIC (PIC)

88101 Full size 6-in-1 screwdriver set .....Δv	$ 16.95	6.95
91102 Stubby 6-in-1 screwdriver set .....Δmv	12.95	4.95

PIPO TOUCH-TONE PADS (PIP)

PK-1 12-digit pad .....m	$ 71.00	
PK-1K 12-digit pad w/delay relay .....m	78.00	
PK-1M 12-digit pad for surface mtg .....m	71.00	
PK-2 16-digit pad .....m	76.00	
PK-2K 16-digit pad w/delay relay .....m	83.00	
PK-2M 16-digit pad for surface mtg .....m	76.00	
P-7V 12-digit vertical rugged mini pad .....m	58.00	

POLYPHASER (PLY)

LIGHTNING PROTECTION

IS-50NX-C2 125-1000 375/125/50w N flange	$ 52.95	
IS-50UX-C0 1.5-400 2kw/375/125w flange mt	52.95	
IS-50UX-C1 50-700MHz 375/125w flange mt.	52.95	
IS-B50LN-C2 125-1000 375/125/50w N bulkhead	59.95	
IS-B50LU-C0 1.5-400 2kw/375/125w bulkhead	59.95	
IS-B50LU-C1 50-700MHz 375/125w bulkhead mt	59.95	
IS-PLDO-120-15A 120v 15A power protector	143.95	
IS-PLDO-120-20A 120v 20A power protector	179.95	
IS-RCT 8-wire rotor control protector	46.95	
J-1 ½" to 1⅓" bronze transition clamp	7.95	
J-2 1½" to 2¼" bronze transition clamp ...	9.95	
IS-SPTL Single phone line protector	57.95	

AES® GIFT CERTIFICATES...
Information on p. 23 & 154

POLYPHASER - continued

		Reg	Sale
1.5" STRAP	1½" copper strap .....per linear ft.	.95	
3" STRAP	3" copper strap .....per linear ft.	2.75	
6" STRAP	6" copper strap .....per linear ft.	3.95	
AL-SPGP	Alum single point ground panel	52.95	
CU-SPGP	Copper single point ground panel ..	52.95	
TK-2	1½" strap to Rohn twr corrosion free clamp	3.95	
TK-3	1½" strap-2¼" to 3¾" mast corr free clamp	6.95	
1C-112S	#6-#1 wire to 1½" strap clamp bond	8.95	
2OC-112S	#2-0 to #4-0 wire to 1½" strap clamp bond	10.95	
58R-112S	1½" strap to ⅝" gnd rod clamp bond	10.95	
MSC-3	Junc; 2+ 1½" or 3" strap clamp bond	8.95	
UNI-KIT 2CT	Gnd kit; coax to alum/tin/galv ...	29.95	
UNI-KIT 2TC	Gnd kit; galv twr leg to copper ..	29.95	
UNI-KIT 2CC	Ground kit; coax to copper	28.95	
UNI-KIT 2TT	Ground kit; galv/alum to galv	30.95	
CCK	Copper cleaning kit; 4 oz can, brush	25.95	
GLEP	Lightning and EMP Protection book	22.95	

PREMIER (See ADI & ANLI)

PRO AM by VALOR (VAL)

VHF/UHF ANTENNAS ONLY (No Mounts)

M0144-440	2m/440 antenna	$ 21.90	19.95
PAQA	136-515 MHz ¼ wave antenna	8.00	
PAQ-144	2m ¼ wave antenna	8.00	
PAQ-435	440 ¼ wave antenna	8.00	
PAQ-3820	2m ¼ wave whip w/⅜-24 thread ...	8.00	
PHB-144	2m ⅝ wave 3 db antenna	31.80	24.95
PHB-220	220 ⅝ wave 3 db antenna .....Δmw	31.80	9.95
PUB-440	440 5 db antenna	39.80	29.95

MOUNTS ONLY FOR ABOVE ANTENNAS

PAM	Low profile magnet mount w/coax	$ 28.40	24.95
PAMB	Black low profile mag mount w/coax ...	28.40	24.95
PAS	¾" surface mount w/coax	20.00	16.95
PASMO	¾" surface mt only (no coax)	7.90	
PAS38	⅜" surface mount w/coax	20.00	14.95
PAS38MO	⅜" surface mt only (no coax)	7.90	
PAT-2	No hole trunk mount w/coax	27.90	22.95
PAT-2B	Black no hole trunk mount w/coax	27.90	22.95
PAT-3	Swivel NMO-style trunk mt w/coax	35.80	29.95

OTHER VHF/UHF ANTENNAS & MOUNTS

77BNC	2m/440 12" 0/2.1db BNC rubber duck	$ 23.90	19.95
144BNC	2m 12" ¼ wave rubber duck w/BNC .	11.00	9.95
220BNC	220 10" ¼ wave rubber duck w/BNC	11.00	9.95
450BNC	440 6½" ¼ wv rubber duck w/BNC	11.00	9.95
BNC-SC	Suction cup extension; rubber ducks	22.60	14.95
WMSL-BNC	Window clip for rubber ducks ...	42.80	29.95
82BNC	Magnet mt for BNC w/coax	27.00	22.95
101ADN	HD alum mirror mt w/SO-239	10.30	
116N	Gutter mt for ⅜-24 up to 48" .....Δmwf	10.10	1.95
301	⅜-24 magnet mt only w/coax	25.40	19.95
401	Low profile ⅜-24 mag mt only w/coax	31.70	26.95
DAK	Mt for 2 vert ants or horizontal dipole	13.80	
GM-100AD	SS GM ⅜-24 mirror mt w/SO-239 .	9.60	
GM-100ADT	Alum GM ⅜-24 mirror mt/SO-239 Δm	9.60	4.95
GM-270	2m/440 2.6/6.3db on glass antenna	59.95	39.95
MM-3401	Maxi-mag mt ⅜-24 kit (3-5" mags)	59.90	49.95
SS-100MOT	3-way NMO mirror mt w/coax	23.80	19.95
CX-144/CX-144B	2m ⅝ wave 3db ⅜-24 whip	17.90	14.95
CX-220	220 ⅝ wave 3 db ⅜-24 whip ....Δmwf	17.90	6.95
MM-270B	2m/440 mini mag mt ant w/BNC ..	56.60	39.95
PAQM	144-450 MHz ¼ wave BNC mag ant	28.80	24.95
PM-144-440BN	2m/440 BNC mag mt ant	33.90	29.95
TGS	30-1200MHz on-glass scanner ant	48.20	39.95
VAA-002	144-450 MHz ¼ wave mag mt ant ...	23.80	19.95
VAA-002BN	144-450 MHz ¼ wv BNC mag ant	27.80	22.95
120	Sawtooth hump mt for mobile radios	7.80	
D-270	2m/440 100w duplexer	45.90	39.95
DB-240	2m/440 base station antenna	105.20	69.95

MOBILE HF ANTENNAS (No Mounts)

AB-5	75/40/20/15/10m antenna	$119.60	89.95
PHF-160	160m 8' ⅜-24 whip	97.80	69.95
PHF-75	75m 8' ⅜-24 whip (4' coil, 4' whip) ..	29.80	24.95
PHF-40	40m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-30	30m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-20	20m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-17	17m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95

PRO AM - continued

		Reg	Sale
PHF-15	15m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-12	12m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-10	10m 8' ⅜-24 whip (4' coil, 4' whip) ..	23.80	19.95
PHF-6	6m 8' ⅜-24 whip (4' coil, 4' whip)	23.80	19.95

QSL Card Holders (ART)

QSL Card Holders, pack of 3, 20 cards/holder .	$ 9.95	

RF APPLICATIONS (RFA)

P-1500	1.8-30MHz dig power/SWR	$219.95	
P-1500-P	Power supply for P-1500	16.95	
P-3000	Deluxe 1.8-30MHz dig power/SWR	299.00	
P-3000-P	Power supply for P-3000	12.95	

RF CONCEPTS (RFC)

144	2m FM mini-amp 2/30w amplifier	$109.95	99.95
144P	2m FM mini-amp 2/30w amp/preamp ..	129.95	119.95
VHF1-60	2m 1/60w HT amplifier	249.95	229.95
2-23	2m FM/SSB 2/30w amp/preamp	149.95	139.95
2-315	2m FM/SSB 30/150w amp/preamp	319.95	289.95
2-417	2m FM/SSB 45/170w amp/preamp	319.95	289.95
2/70	2m/440 FM 3/30//5/20w HT amp	259.95	239.95
2/70G	2m/440 FM 3/30//5/20w HT amp/preamp .	289.95	259.95
2/70H	2m/440 20/200//20/100w N amp	749.95	699.95
3-22	220 FM/SSB 2/20w amp/preamp	149.95	139.95
3-211	220 FM/SSB 2/110w amp/preamp	349.95	319.95
3-112	220 FM/SSB 10/120w amp/preamp	349.95	319.95
3-312	220 FM/SSB 30/120w amp/preamp	339.95	299.95
440	440 FM mini-amp 3/20w amplifier	119.95	109.95
440P	440 FM mini-amp 3/20w amp/preamp .	139.95	129.95
UHF-50	440 3/50w HT type N amplifier	299.95	269.95
4-32	440 FM/SSB 3/20w amp/preamp	159.95	149.95
4-110	440 FM/SSB 10/100w N amp/preamp .	389.95	359.95
4-310	440 FM/SSB 30/100w N amp/preamp .	359.95	329.95

RF LIMITED (RFL)

HL-35V	2m .5-5/20-35w Power Plus amp/preamp	$119.95	99.95

RF PARTS (See Diamond)

RF PRODUCTS (RFP)

196-214	2m ¼ wv BNC telescopic whip ..Δm	$ 8.95	6.95
199-416	BNC mag mt, 10' coax w/BNC	17.95	
199-495	SO239 mag mt, 13' coax/PL259 Δwfv	23.95	9.95

RMS (RMS)

CN-220	1.8-225MHz 1.5kw PEP meter	$130.99
PA-546	2m 5/45w amplifier	124.99
W-450	140-170/430-470MHz 150w meter	69.99

RACOM (RCO)

700	Automatic morse code identifier .....m	$ 92.00
700-PC	Programming kit .....m	30.00

Radio Amateur Callbook (RAC)

058883	1996 North American Callbook	$ 35.00
058875	1996 International Callbook	35.00
059278	1996 World Radio TV Handbook	24.95
RACD01	1996 No. Am/Int CD-ROM Callbook ..	49.95

RADIO PUBLICATIONS

087034	All About Cubical Quad Antennas	$ 13.95
087042	Beam Antenna Handbook	13.95
087050	All About VHF Amateur Radio	13.95
087069	Radio Amateur Antenna Handbook ...	13.95
087077	Simple, Low Cost Wire Antennas	13.95
087093	Interference Handbook	13.95
087107	All About Vertical Antennas	13.95

GORDON WEST RADIO SCHOOL

087263	Novice Voice Class	$ 5.95
087417/GW0990	FCC Rules and Regulations	3.50

RAMSEY (RAM)

AA-7	Active antenna kit	$ 28.95
AF-1	Hi-Q CW audio filter kit	34.95
AR-1	Aircraft receiver kit	29.95
CS-1	Crystal radio set kit	19.95
CW-7	CMOS keyer kit	24.95
DF-1	Foxhound direction finder kit	59.95
DN-1	Nicad conditioner/fast charger kit	49.95
FM-1	300' FM broadcast transmitter kit	5.95
FM-4	Hi power FM broadcast transmitter kit .	14.95

RAMSEY - continued

		Reg	Sale
FR-1	FM broadcast receiver kit	24.95	
HR-20	20m receiver kit	29.95	
HR-40	40m receiver kit	29.95	
HR-80	80m receiver kit	29.95	
PR-10	2m preamp kit	17.95	
QRP-20	20m CW transmitter kit	29.95	
QRP-40	40m CW transmitter kit	29.95	
QRP-80	80m CW transmitter kit	29.95	
RFS-1	RF sensed switch kit	14.95	
SCA-1	SCA decoder kit.....	27.95	
SR-1	Shortwave receiver kit	29.95	
TS-1	CW touch paddle switch kit	6.95	
UT-5	Universal timer kit	8.95	
VS-1	Voice activated switch kit	6.95	
WA-10	BNC telescopic whip antenna	12.95	

RANGER (RAN)

RCI-2950	25w FM/SSB 10m Xcvr	$499.00	259.95
RCI-2970	100w FM/SSB 10m Xcvr	699.00	369.95

Revere Industries (REV)

RCS-1	Mobile mini speaker .....Δm	$ 12.95	5.95

ROHN TOWERS (ROH)

HBX-40/BXB-6	40' tower, 10 sq ft, 228 lbs *T	$469.90	399.95
HBX-48/BXB-7	48' tower, 10 sq ft, 303 lbs *T	628.60	499.95
HBX-56/BXB-8	56' tower, 10 sq ft, 385 lbs *T	789.00	629.95
HDBX-40/BXB-7	40' tower, 18 sq ft, 281 lbs *T	584.60	469.95
HDBX-48/BXB-8	48' tower, 18 sq ft, 363 lbs *T	775.00	619.95

*Drop-shipped from factory or limited stock in Milwaukee for pick-up

On factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft.

SS040D70RTP	40' 70mph self supporting .*T	1760.80	1199
SS050D70RTP	50' 70mph self supporting .*T	2135.80	1439
SS060D70RTP	60' 70mph self supporting .*T	3110.80	2099
SS070D70RTP	70' 70mph self supporting .*T	3485.80	2269
SS080D70RTP	80' 70mph self supporting .*T	4635.80	3119
SS090D70RTP	90' 70mph self supporting .*T	5012.70	3369

*SS-series towers drop-shipped from factory only

Other Rohn Towers available on Special Order

SGC (SGC)

04-01	SG-2000 150w 1.8-30 MHz 12v Xcvr ..	1995.00	1479
04-10	SG-2000 Xcvr w/PowerTalk remote head	2495.00	CALL
04-12	Remote kit w/swivel bkt & cable	200.00	179.95
04-13	Remote kit w/5-way mount & cable .	350.00	319.95
04-14	Rem kit w/suction cup mt & cable	495.00	449.95
04-22	PowerTalk remote head	1095.00	929.95
51-81	Fan kit for continuous duty xmit	300.00	269.95
52-31	Waterproof military handset	375.00	339.95
52-32	Telephone handset	190.00	174.95
52-34	RS-232 interface; SG-2000 Xcvr	195.00	179.95
52-46	Mounting tray	50.00	
52-47	Shock/military mounting tray	300.00	269.95
52-51	CA-1 High voltage feed wire ..per ft.	70¢	
52-52	CA-2 RG-58 coax cable .....per ft.	90¢	
52-53	CA-230 Ant coupler cable .....per ft.	4.00	
52-54	CA-2000 Remote head cable .per ft.	4.00	
52-56	CA-4 RG-8A/U coax cable .....per ft.	1.10	
53-03	PS-35/AC 30A/45A peak HD ps	700.00	629.95
52-61	PSC/12-1 12' ps cable, 1 plug	50.00	
52-62	PSC/12-2 12' ps cable, 2 plugs	60.00	
52-63	PSC/25-1 25' ps cable, 1 plug	60.00	
52-64	PSC/25-2 25' ps cable, 2 plugs	70.00	
53-53	PS fan kit for continuous xmit	300.00	269.95
54-12	SG-230 150w 1.8-30 MHz 12v auto tuner .	595.00	489.95
54-61	25' extension cable	60.00	
54-62	50' extension cable	90.00	
54-63	SmartLock; tuners made after 9/1/93	59.95	
55-04	SG-103 1.8-30MHz broadband 150w dip †m	450.00	199.95

SGC - continued

	Reg	Sale
55-06 SG-104 2-28 MHz 90' 1kw dipole	700.00	629.95
55-27 SG-303 1.8-30 9' mobile whip & mt	495.00	449.95
55-67 Replacement whip for SG-303	150.00	139.95
55-41 SG-104 2-28MHz 90' 1kw dipole w/coax	750.00	679.95
55-45 QMS Quick universal mount system	490.00	449.95
55-46 QMS-1 Quick mt system w/SG-230	1085.00	979.95
55-47 QMS-2 Quick mt sys w/SG-230/303 †mv	1580.00	895.00
55-91 60' RG-58/U coax w/PL-259s	50.00	
55-92 120' RG-58/U coax w/PL-259s	70.00	
55-93 60' RG-8 coax w/PL-259s	80.00	
55-94 120' RG-8 coax w/PL-259s	120.00	
55-95 150' total extension; SG-103/104	70.00	
56-15 External ARQ/FEC system	1200.00	1069
90-30 SG-2000-RS Spares kit for SG-2000	789.00	709.95
90-31 SG-2000-DS Depot spares kit; SG-2000	1512.00	1349
90-32 SG-2000-CS Dlx spares kit; SG-2000	3953.00	3549

SANGEAN (SAN)

ATS-202 AM/FM/shortwave portable receiver	$159.00	89.95
ATS-303 AM/FM/shortwave portable receiver	119.00	79.95
ATS-808 AM/FM/shortwave port Rcvr .....Dmf	259.00	149.95
ATS-818 AM/FM/shortwave portable receiver	299.00	179.95
ATS-818CS AM/FM/SW port Rcvr w/cassette	359.00	229.95
DT-200V AM/FM/VHF TV sound dig port Rcvr	79.95	69.95
SG-796 AM/FM/shortwave portable Rcvr ..Dm	59.95	29.95

SEQUOIA (SEQ)

POCKET PC REF Pocket PC reference book	$ 14.95
POCKET REF Pocket reference book	9.95

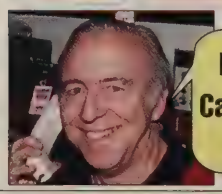
SHURE (SHU)

444D High/low-Z desk microphone	$ 98.75	86.95
R111 Replacement cartridge	30.40	
526T Series II Dynamic amplified desk mic	129.00	112.95
R96 Replacement cartridge	26.20	
404C High-Z deluxe mobile microphone	64.25	59.95
R5F Replacement cartridge	30.20	

SMILEY ANTENNA (SMI)

270A 2m/440 gain telescopic whip	$ 19.95
5/8 SLD-2 2m ⅝ Slim Duck rubber ant	17.95
5/8 SLD-220 220 ⅝ Slim Duck rubber ant	17.95
5/8 SLD-440 440 ⅝ Slim Duck rubber ant	17.95
5/8 SLD-2 Combo 2m ⅝ duck & stubby ant	24.95
5/8 SLD-220 Combo 220 ⅝ duck & stubby ant	24.95
5/8 SLD-440 Combo 440 ⅝ duck & stubby ant	24.95
FLX 1/2 WAV-2M ½ wv 2m BNC whip/flex coil	25.95
RD-2 2m rubber duck antenna	14.95
RD-220 220 rubber duck antenna	14.95
RDMD-2 2m mini rubber duck antenna	14.95
RDMD-220 220 mini rubber duck antenna	14.95
RDMD-440 440 mini rubber duck antenna	14.95
RDS-2 2m stubby rubber duck antenna	14.95
RDS-220 220 stubby rubber duck antenna	14.95
RDS-440 440 stubby rubber duck antenna	14.95
SD-2 2m Slim Duck thin rubber antenna	14.95
SD-220 220 Slim Duck thin rubber antenna	14.95
SL-440 440 slimline type duck	12.95
SS-II Super Stick 2m ⅝ wv telescopic ant	19.95
SS-III Super Stick 220 ⅝ wv telescopic ant	19.95
SS-IV Super Stick 440 ⅝ wv telescopic ant	19.95
SS-II/Combo 2m ⅝ wv telescopic & stubby ant	26.95
SS-III/Combo 220 ⅝ wv telescopic & stubby ant	26.95

Apply for your AES® CREDIT CARD
Application on p. 156



Hi!... I'm Dave AB4ZR
Call us Toll Free and shop the easy way!

SMILEY - continued

	Reg	Sale
SS-IV/Combo 440 ⅝ wv telescopic & stubby ant	26.95	
TAQ-2 2m ¼ wave stainless whip	10.95	
TAQ-220 220 ¼ wave stainless whip	10.95	
TAQ-440 440 ¼ wave stainless whip	10.95	
TS Thin Stick 2m/220 ⅜ wave telescopic whip	16.95	

SOLARCON (SOL)

A-99 10m fiberglass base station antenna	$ 74.95	59.95
GPK-1 Ground plane radial kit	39.95	

SOLDER-IT (SLD)

ALP-21D Aluminum solder paste, 7.1gm	$ 6.00
SP-7D Solder paste, 7.1 gm	6.00

SONY (SON)

ICF-SW15 AM/FM/SW port receiver .....Dmv	$ 89.95	69.95
ICF-2010 AM/FM/SW/LW/air port Rcvr w/ps	429.95	359.95
ICF-SW10 AM/FM/SW compact receiver	59.95	49.95
ICF-SW30 AM/FM/SW portable receiver	129.95	99.95
ICF-SW33 AM/FM/SW portable receiver	199.95	169.95
ICF-SW55 AM/FM/SW portable receiver	429.95	349.95
ICF-SW77 AM/FM/SW portable receiver	649.95	449.95
ICF-SW100S AM/FM/SW portable receiver	479.95	349.95
ICF-SW1000T AM/FM/SW port Rcvr w/cassette	699.95	599.95
ICF-SW7600G AM/FM/SW portable receiver	229.95	199.95
AC-E60HG 6vdc 400ma AC adapter	19.99	
AN-1 LW/MW/SW outdoor active rcv ant	119.95	99.95
AN-3 Aircraft active receive antenna	99.95	89.95
AN-102 LW/MW/SW indoor active rcv ant	84.95	79.95

Following are SONY Consumer Products from our Audio Plus division. Please call them direct to order.
Ph. (800) 462-9489 • (414) 235-8934
See AUDIO PLUS Display Ad - p. 158

MINI DISC

MZ-E2 Mini disc player	$549.99	449.95
MZ-E3 Player only	449.95	379.95
MZ-R2 Mini disc player/recorder	749.99	639.95
MZ-R3 Recorder	649.95	529.95

DISCMAN

D-131 1 bit w/mega bass	$139.99	99.95
D-143 Mega bass, nicads	129.95	97.95
D-235CK Car discman w/ESP	229.95	179.95
D-335 Top of the line car discman, 1 bit 2xESP	349.99	259.95
D-848 Super ESP & wireless remote	349.95	269.95

AM/FM WALKMAN

SRFM33 Digital w/presets	$ 39.99	34.95
SRF36 FM only	19.99	12.95

AM/FM CASSETTE WALKMAN

WMFX407 Dig/presets/auto rev/Dolby/mega bass	$ 89.99	69.95
WMFX507 Super Walkman! Dig/auto rev/Dolby	179.99	139.95

SPORTS WALKMAN

SRF85 AM/FM only	$ 49.99	34.95
SRFM70 Digital tuner w/10 presets	64.99	49.95
WMFS395 Top of the line! Dig/Dolby/water res	99.99	89.95

PORTABLES

CFD8 AM/FM, CD, cassette	$129.99	99.95
CFD610 Dig w/remote/6 disc CD changer/hi pwr	349.99	269.95
CFD768 1 bit CD, dig, autoreverse, rem, 20w	389.99	299.95

MICRO CASSETTES

M425 Pressman micro recorder	$ 32.99	27.95
M727V VOR w/tape counter	69.99	56.95

ANSWERING MACHINES

TAM50 Voice time & date stamp, rem call bk	$129.99	69.95
ITA3000 Integrated phone/dig ans machine	299.99	219.95

FEATURE PHONES

ITD10 Scratch pad memory	$ 69.99	49.95
ITD20 2-line, distinctive ring for each line	99.99	79.95

CORDLESS PHONES

SPP160 10 ch, spkr phone, 2-way intercom	$249.99	149.95
SPPD15 2 line, 10 number memory	269.99	179.95
SPPX90 10 ch, top of the line, 2 phones in 1	349.99	259.95

SOUTH RIVER (UPS OK) (SOU)

HDT-3E-PPK 3' boxed tripod	$ 19.95

SOUTH RIVER - continued

	Reg	Sale
HDT-5E-PPK 5' boxed tripod	29.95	

STANDARD (STA)

C-158A Dlx mini 2m FM HT/batt/cgr/TTP .Dmw	$299.00	239.95
$30 coupon - C-158A until gone! OR FREE CMP-115 from Standard - C-158A until gone!		
C-178A 2m/440 FM HT/batt/cgr/TTP/CTCSS	459.00	CALL
FREE CMP-115 from Standard - C-178A thru 11/30/95		
C-228A 2m/220 FM HT/batt/cgr/TTP/CTCSS	695.00	CALL
$30 coupon - C-228A thru 11/30/95 OR FREE CMP-115 from Standard - C-228A thru 11/30/95		
C-528A 2m/440 FM HT/batt/cgr/TTP/CTCSS	495.00	CALL
$25 coupon - C-528A thru 11/30/95 OR FREE CMP-115 from Standard - C-528A thru 11/30/95		
C-558A 2m/440 FM HT/batt/cgr/TTP/CTCSS	665.00	CALL
$30 coupon - C-558A thru 11/30/95 OR FREE CMP-115 from Standard - C-558A thru 11/30/95		
C-568A 2m/440/1.2 FM HT/batt/cgr/TTP/CTCSS	699.00	CALL
C-628A 440/1.2 FM HT/batt/cgr/TTP/CTCSS	727.00	CALL
CAX-02 Bottom cover	12.50	
CAX-03 Bottom cover	12.50	
CAW-150 Mobile power supply cable	18.00	
CAW-151 12vdc power supply cable	14.50	
CAW-152 Cig cord w/filter	30.50	
CBT-151 Battery case	22.00	
CBT-171 6 cell battery case	21.00	
CBT-175 2 cell battery case	17.00	
CHP-111 Headset mic w/PTT switch	48.00	
CHP-150 Headset mic w/VOX	87.50	
CMB-600 Helmet clip for CHP-150	14.50	
CLC-171 Soft case for CNB-171	30.00	
CLC-172 Soft case for CNB-172/173	30.00	
CLC-175 Soft case for CBT-175	30.00	
CLC-520 Std carrying case; 228A/528A	26.00	
CLC-521 Large carrying case; 228A/528A	29.00	
CLC-550 Standard carrying case; 558A	29.00	
CLC-551 Large carrying case; 558A	31.00	
CLC-555GN Green carrying case .....Δfv	35.00	24.95
CLC-555OR Orange carrying case	35.00	
CLC-560 Case; CBT-171/CNB-171; C-568A	27.00	
CLC-561 Case; CNB-172/173 with C-568A	27.00	
CLC-562 Leather case; CBT-171/CNB-171	52.00	
CMB-111 Mobile bracket	22.00	
CMB-112 Mounting bracket	27.50	
CMC-150 Mobile charger	28.00	
CMP-111 Speaker/mic	58.00	
CMP-113 Tie-pin spkr/mic	48.00	
CMP-115 Mini speaker/mic	53.00	
CMP-123 Ear phone spkr/mic	63.00	
CMU-160 40 ch mem; 558A/168A ...Δmwfv	33.00	14.95
CMU-161 200 channel memory	48.00	
CNB-151 Extra 7.2v 700ma nicad batt	82.00	
CNB-152 12v 600ma nicad battery	99.00	
CNB-153 7.2v 1000ma nicad battery	99.00	
CNB-171 7.2v 700ma nicad battery	80.00	
CNB-172 12v 600ma nicad battery	127.00	119.95
CNB-173 7.2v 1100ma nicad battery	99.00	94.95
CSA-181A Desk rapid charger	128.00	119.95
CTN-520 Enc/decode; early 228/528A .....Δf	96.00	49.95
C-168A Dlx sub-mini 2m FM HT/batt/cgr/TTP	469.00	CALL
FREE CMP-115 from Standard - C-168A thru 11/30/95		
C-468A Dlx sub-mini 440 FM HT/batt/cgr/TTP	480.00	CALL
FREE CMP-115 from Standard - C-468A thru 11/30/95		
CAX-03 Bottom cover	12.50	
CAX-160 Remote battery adapter .....Δmwf	52.00	19.95
CBT-160 Battery case	21.00	
CHP-111 Headset mic w/PTT switch	48.00	
CHP-150 Headset mic w/VOX	87.50	
CLC-160 Mini carrying case	26.50	
CLC-161 Mini carrying case	27.50	
CLC-162 Mini carrying case	28.00	
CMP-111 Speaker/mic	58.00	
CMP-113 Tie-pin spkr/mic	48.00	
CMP-115 Mini speaker/mic	53.00	
CMP-123 Ear phone spkr/mic	63.00	
CMU-160 40 ch mem; 168A/558A ...Δmwfv	33.00	14.95
CMU-161 200 channel memory	48.00	
CNB-160 Mini 6v 300ma nicad batt Δmwfv	72.00	39.95
CNB-161 Mini 7.2v 700ma nicad battery	78.00	

STANDARD - continued

	Reg	Sale
CNB-162 Mini 12v 600ma nicad battery	130.00	119.95
CNB-163 Mini 7.2v 1000ma nicad batt	95.00	
CSA-181A Desk rapid charger	128.00	119.95
C-188A Thin sub-mini 2m HT/TTP .....Δwfv	395.00	284.95
$25 coupon - C-188A thru 11/30/95 OR		
FREE CMP-115 from Standard - C-188A thru 11/30/95		
C-288A Thin sub-mini 220 HT/batt/cgr/TTP	449.00	CALL
CBT-181 Battery case for 4 AA	18.00	
CBT-182 Battery case for 5 AA	28.00	
CHP-111 Headset mic w/PTT switch	48.00	
CHP-150 Headset mic w/VOX	87.50	
CLC-181 Carrying case w/CNB-181	23.00	
CLC-182 Carrying case w/CNB-182/3/4	25.00	
CMA-181 Mobile adapter	42.00	
CMP-111 Speaker/mic	58.00	
CMP-113 Tie-pin spkr/mic	48.00	
CMP-115 Mini speaker/mic	53.00	
CMP-123 Ear phone spkr/mic	63.00	
CMU-182 200 ch memory for C-188A/288A	48.00	
CNB-181 4.8v 700ma nicad battery	59.00	
CNB-182 9.6v 600ma nicad battery	115.00	104.95
CNB-183 6v 1100ma nicad battery	97.00	92.95
CNB-184 6v 700ma nicad battery	69.00	
CSA-181A Desk rapid charger	128.00	119.95
C-108A 200mw 2m FM HT	269.00	CALL
C-508A 280mw 2m/440 FM HT	345.00	CALL
CBH-160 Molded belt clip	12.50	
CHP-111 Headset mic w/PTT switch	48.00	
CHP-150 Headset mic w/VOX	87.50	
CLC-401 Standard soft case; C-108A	16.00	
CLC-402 Dlx soft case w/belt loop; C-108A	23.00	
CLC-502 Standard soft case; C-508A	18.00	
CMP-111 Speaker/mic	58.00	
CMP-113 Tie-pin spkr/mic	48.00	
CMP-115 Mini speaker/mic	53.00	
CMP-123 Ear phone spkr/mic	63.00	
CNB-401 Nicad battery	22.00	
CSA-401A Desk charger	48.00	
C-1208DA 50w 2m FM Xcvr w/TTP	549.00	CALL
CAW-561 6.5' mic extension cable	36.00	
CAW-562 13' mic extension cable	48.00	
C-5718DA 50/40w 2m/440 FM Xcvr/packet	849.00	CALL
CAW-570 Split cable for microphone	63.00	
CAW-571 6.5' mic extension cable	49.00	
CAW-572 13' mic extension cable	54.00	
CAW-579 Packet cable	32.00	
CRC-5700 Front panel w/freq display	239.00	219.95
CAW-573 6.5' front panel extension cable	28.00	
CAW-574 13' front panel extension cable	39.00	
CSK-12 External speaker	47.00	
CCR-708A 50-905MHz spectral disp Rcvr .Δmwfv	750.00	739.95

STARTEK (STR)

1350 1-1300 MHz frequency counter	$129.00	119.95
ATH-10 1-1200 MHz freq counter w/ATH	179.00	149.95
ATH-15 1-1500MHz bar graph freq counter	235.00	189.95
ATH-15/OS 1-1500Mhz ctr w/1-shot opt .....m	275.00	229.95
ATH-15/OS/HS 1500MHz/1-shot/hi stab .....m	375.00	329.95
ATH-30 1-2800MHz bar graph ctr w/1-shot	299.00	249.95
ATH-30/HS 2800MHz/1-shot/hi-stability	399.00	339.95
ATH-50 5Hz-2800MHz bar/auto trig/hi speed	339.00	289.95
ATH-50/HS 2800MHzr/trig/hi spd/hi stability	439.00	379.95
APA-9/VPA-9 9vdc auto power adapter	6.00	
BP-150 130 - 500 MHz bandpass filter	49.00	
CC-90 Carrying case	12.00	
DC-5 BNC to clip leads cable	12.00	
DC-10 Direct probe	22.00	
HP-400 400 - 1500 MHz bandpass filter	49.00	
HP-800 800 MHz - 2 GHz bandpass filter	49.00	
LP-22 Lo-pass probe	29.00	
LP-60 DC - 60 MHz bandpass filter	49.00	
M-207-IC Interface cable	10.00	
P-110 200 MHz X1-X10 probe	69.00	39.95
RD-2750 27-50MHz rubber duck antenna	19.00	
RD-150 150MHz rubber duck antenna	16.00	
RD-450 450MHz rubber duck antenna	16.00	
RD-800 800MHz rubber duck antenna	16.00	
TA-90 Telescopic antenna	12.00	
TA-90L Right angle telescopic antenna	16.00	

	Reg	Sale

SWIECH (SWE)

COY2M3EL 3 element 2m beam .....m	$ 64.95	

TAB Books (TAB)

447748 Shortwave Listener's Q & A Book	$ 12.95	
633626 Radio Amateur's Digital Comm Handbook	14.95	
640967 Amateur Radio Encyclopedia	29.95	
641351 Shortwave Radio Listening for Beginners	12.95	
643478 Complete SW Listener's Handbook	19.95	
643540 Beginner's Handbook of Amateur Radio	21.95	
765340 Build Your Own Shortwave Antennas	16.95	

TIMEWAVE (TIM)

DSP-9 Digital signal processing unit	$169.00	
DSP-9 PLUS Advanced dig sig processing unit	209.00	199.95
DSP-59 PLUS Dlx dig signal processing unit	269.00	259.95
DSP-599zx All-mode DSP noise filter	349.00	339.95
Upgrade 3.0 DSP-9 to ver 3.0 upgrade kit ..m	30.00	

TRIPP LITE (TRI)

PR-7 5A power supply, 7A surge	$ 55.00	47.95
PR-10 7.5A power supply, 10A surge	79.00	63.95
PR-12 9A power supply, 12A surge	85.00	68.95
PR-20 16A power supply, 20A surge	114.00	94.95
PR-30 24A power supply, 30A surge	172.00	129.95
PR-40 32A power supply, 40A surge	211.00	166.95
PR-50 37A power supply, 50A surge	262.00	199.95
PR-60 48A power supply, 60A surge	309.00	237.95
BC PERS-280 Standby UPS 280VA, 2 outlets	137.00	123.95
BC PERS-420 Standby UPS 420VA, 2 outlets	189.00	169.95
BC INTERNET-450 Stdby UPS 450VA, net protect	209.00	188.95
SUPER-7 7 outlet surge suppressor	29.95	23.95
SUPER-7+TEL 7 outlet/fax modem surge	39.95	29.95
TR-6 6 outlet super surge suppressor	59.95	46.95
ISOBAR-6 6 outlet premium surge suppressor	79.95	59.95
MT-6+ 6 outlet console surge suppressor	149.95	115.95

TUBES (TUB)

6146B Tube .....each	$ 14.95	
12BY7A Tube .....each	12.95	
3-500G High dissipation tube (3-500Z)..each	109.95	
572B For Yaesu, etc. .....each	49.95	
811A For Collins, etc. .....each	14.95	

Also see EIMAC

TUNE BELT (TUN)

HH-1PS Up to 5" HT radio belt	$ 19.95	
HH-1PM Up to 6" HT radio belt	19.95	
HH-1PL Up to 7" HT radio belt	19.95	
HH-2PM Up to 6" HT radio belt w/batt pocket	21.95	
HH-2PL Up to 8" HT radio belt w/batt pocket	21.95	

US TOWER (UST)

	Reg	Sale
FREE STANDING CRANK-UPS (T²X not recommended)		
TX-438 38' crank-up tower .....T	1133.00	1019
TX-455 55' crank-up tower .....T	1710.00	1499
TX-472 72' crank-up tower .....T	2810.00	2529
TX-472MDP 72' crank-up w/motor drive .....T	4521.00	4068
TX-489 89' crank-up tower .....T	4888.00	4399
TX-489MDPL 89' crank-up w/motor drive ....T	7332.00	6598
FREE STANDING HEAVY DUTY CRANK-UP TOWERS		
HDX-538 38' crank-up tower .....T	1466.00	1319
HDX-555 55' crank-up tower .....T	2566.00	2309
HDX-572 72' crank-up tower .....T	4399.00	3959
HDX-572MDPL 72' crank-up w/motor drive .T	6721.00	6048
HDX-589MDPL 89' crank-up w/motor drive .T	8799.00	7919
HDX-689MDPL 89' HD crank-up w/motor .....T	16999.00	15299
HDX-5106MDPL 106' HD crank-up w/motor .T	18499.00	16649
COMPACT TMM (Top mount rotor for full retraction)		
TMM-433SS 33' crank-up tower .....T	1210.00	1089
TMM-433HD 33' HD crank-up tower .....T	1466.00	1319
TMM-541SS 41' crank-up tower .....T	1588.00	1429
ACCESSORIES FOR CRANK-UP TOWERS		
CX-2 Coax arms (2) for 2-section tower	$ 49.00	
CX-3 Coax arms (3) for 3-section tower	69.00	
CX-4 Coax arms (4) for 4-section tower	109.00	
CX-5 Coax arms (5) for 5-section tower	149.00	134
CX-6 Coax arms (6) for 6-section tower	189.00	170

US TOWER - continued

	Reg	Sale
HDP Service platform .....T	739.00	665
STS-4 Rotor accessory for TX/TMM towers ...T	210.00	189
IV-16 Inverted vee arm for MA's	37.00	
M-5 2" OD 5' mast extension for MA's	36.00	
M-10 2" OD 10' mast .....T	69.00	
M-15 2" OD 15' mast .....T	103.00	
M-20 2" OD 20' mast .....T	136.00	122
M-15R 2" OD 15' reinforced mast .....T	155.00	140
M-20R 2" OD 20' reinforced mast .....T	205.00	184
CM-20 2" OD 20' .375 wall mast .....T	449.00	404
MD-75 Heavy duty 1 HP motor drive .....T	989.00	890
MDP-750 Pull-down drive; TX-472/HDX-555 T	1539.00	1385
MDPL-1000 Pull-down drive; HDX-572 .....T	2089.00	1880
MRF Mast raising fixture	266.00	239
MCL-100 Limit switch package	432.00	388
RMC-1000 Remote control w/limit switch	989.00	890
RP-3 Rotor plate for 10" section	20.00	
RP-4 Rotor plate for 12½" section	26.00	
RP-5 Rotor plate for 15" section	32.00	
TRX-80 Raising fixture; TX-438/455;HDX-538/555 ..T	431.00	387
TRX-80HD Raising fixture;TX-472/489;HDX-572/589 ...T	567.00	510
TRX-100HD Raising fixture; HDX-689/5106 .T	799.00	719
TB-2US Thrust bearing; 2" mast w/2 flange holes	98.00	
MA-SERIES TUBULAR TOWERS		
MA-40 40' crank-up mast .....†T	$899.00	679
MA-550 55' crank-up mast .....†T	1521.00	1069
MA-550MDP 55' crank-up mast w/motor .....T	2909.00	2618
MA-770 70' crank-up mast .....T	2509.00	2258
MA-770MDP 70' crank up mast w/motor .....T	3969.00	3572
MA-850MDP 85' crank-up mast w/motor .....T	5349.00	4814
MA-SERIES ACCESSORIES		
CX-2M Coax arms (2) for MA-40	$ 53.00	
CX-3M Coax arms (3) for MA-550	79.00	
CX-4M Coax arms (4) for MA-770	132.00	119
CX-5M Coax arms (5) for MA-850	159.00	143
MAB-40 Hinged base for MA-40 .....T	359.00	323
MAB-550 Hinged base for MA-550 .....T	429.00	386
MAB-770 Hinged base for MA-770 .....T	519.00	467
MAB-850 Hinged base for MA-850 .....T	629.00	566
MAF-40 Raising fixture for MA-40	220.00	198
MAF-550 Raising fixture for MA-550 .....T	304.00	273
MAF-770 Raising fixture for MA-770 .....T	309.00	278
MAF-850 Raising fixture for MA-850 .....T	409.00	368
MARB-40 Rotor base accessory for MA-40 ...T	549.00	494
MARB-550 Rotor base accessory for MA-550 T	649.00	584
MARB-770 Rotor base accessory for MA-770 T	769.00	692
MARB-850 Rotor base accessory for MA-850 T	909.00	818

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

UNADILLA (See W2AU)

UNIDEN (UNI)

HR-2510 25w 10m FM/SSB Xcvr	$249.95	

Unified Microsystems (UNM)

W9XT Contest card for IBM PC & compatible	$149.95	139.95

Universal Towers (UNT)

4-30 4 sq ft wind load 30' alum tower .....T	$335.00	302
9-30 9 sq ft wind load 30' alum tower .....T	451.00	406

TOP TRADES
for late model SSB & FM gear!
Upgrade Now!
Call for our Quote – Today!

UNIVERSAL - continued

		Reg	Sale
12-30	12 sq ft wind load 30' alum tower .....T	593.00	534
21-30	21 sq ft wind load 30' alum tower .....T	704.00	634
23-30	23 sq ft wind load 30' alum tower .....T	932.00	839
35-30	35 sq ft wind load 30' alum tower .....T	1050.00	945
4-40	4 sq ft wind load 40' alum tower .....T	562.00	506
7-40	7 sq ft wind load 40' alum tower .....T	706.00	635
9-40	9 sq ft wind load 40' alum tower .....T	787.00	708
12-40	12 sq ft wind load 40' alum tower .....T	932.00	839
15-40	15 sq ft wind load 40' alum tower .....T	1042.00	938
21-40	21 sq ft wind load 40' alum tower .....T	1157.00	1041
23-40	23 sq ft wind load 40' alum tower .....T	1385.00	1247
4-50	4 sq ft wind load 50' alum tower .....T	792.00	713
5-50	5 sq ft wind load 50' alum tower .....T	900.00	810
7-50	7 sq ft wind load 50' alum tower .....T	1013.00	912
9-50	9 sq ft wind load 50' alum tower .....T	1126.00	1013
15-50	15 sq ft wind load 50' alum tower .....T	1496.00	1346
16-50	16 sq ft wind load 50' alum tower .....T	1614.00	1453
4-60	4 sq ft wind load 60' alum tower .....T	1127.00	1014
6-60	6 sq ft wind load 60' alum tower .....T	1382.00	1244
7-60	7 sq ft wind load 60' alum tower .....T	1471.00	1324
9-60	9 sq ft wind load 60' alum tower .....T	1577.00	1419
3-70	3 sq ft wind load 70' alum tower .....T	1469.00	1322
4-70	4 sq ft wind load 70' alum tower .....T	1805.00	1625
6-70	6 sq ft wind load 70' alum tower .....T	1838.00	1654
7-70	7 sq ft wind load 70' alum tower .....T	1922.00	1729
3-80	3 sq ft wind load 80' alum tower .....T	1920.00	1728
4-80	4 sq ft wind load 80' alum tower .....T	2293.00	2064
2-90	2 sq ft wind load 90' alum tower .....T	2375.00	2138
B-14	Base for tower	60.58	55
B-18	Base for tower	60.58	55
B-22	Base for tower	106.04	95
B-26	Base for tower	136.33	123
RFM-14	Flat roof mt for guyed tower	42.32	38
RFM-18	Flat roof mt for guyed tower	66.69	60
RFM-22	Flat roof mt for guyed tower	99.96	90
RFM-26	Flat roof mt for guyed tower	133.33	120
R-11	Rotor mount	30.27	27
R-14	Rotor mount	45.33	41
R-18	Rotor mount	60.58	55

SEE LITERATURE FOR CONFIGURATION OF TOWERS

11 Top	11" top tower section .....T	113.66	102
14 Top	14" top tower section .....T	143.22	129
18 Top	18" top tower section .....T	259.72	234
14 Taper	14" taper tower section .....T	126.00	113
18 Taper	18" taper tower section .....T	226.00	203
22 Taper	22" taper tower section .....T	337.00	303
26 Taper	26" taper tower section .....T	453.00	408
11 Straight	11" straight tower section .....T	112.00	101
14 Straight	14" straight tower section .....T	126.00	113
18 Straight	18" straight tower section .....T	226.00	203
22 Straight	22" straight tower section .....T	337.00	303
26 Straight	26" straight tower section .....T	453.00	408
HD35-40	35 sq ft wind load 40' alum tower T	1616.00	1454
HD21-50	21 sq ft wind load 50' alum tower T	1724.00	1552

Hi! I'm BOB KG7D...
Lines busy??
Afternoon hours are the best bet for Prompt Phone Service!

UNIVERSAL - continued

		Reg	Sale
HD9-60	9 sq ft wind load 60' alum tower ....T	1808.00	1627
HD16-60	16 sq ft wind load 60' alum tower T	2178.00	1960
HD21-60	21 sq ft wind load 60' alum tower T	2295.00	2065
HD8-70	8 sq ft wind load 70' alum tower ....T	2034.00	1831
HD12-70	12 sq ft wind load 70' alum tower T	2519.00	2267
HD17-70	17 sq ft wind load 70' alum tower T	2749.00	2474
HD21-70	21 sq ft wind load 70' alum tower T	2864.00	2578
HD8-80	8 sq ft wind load 80' alum tower ....T	2603.00	2343
HD9-80	9 sq ft wind load 80' alum tower ....T	2716.00	2444
HD11-80	11 sq ft wind load 80' alum tower T	3085.00	2777
HD12-80	12 sq ft wind load 80' alum tower T	3090.00	2781
HD16-80	16 sq ft wind load 80' alum tower T	3317.00	2985
HD4-90	4 sq ft wind load 90' alum tower ....T	2710.00	2439
HD8-90	8 sq ft wind load 90' alum tower ....T	3198.00	2878
HD11-90	11 sq ft wind load 90' alum tower T	3656.00	3290
HD4-100	4 sq ft wind load 100' alum tower T	3630.00	3267
HD8-100	8 sq ft wind load 100' alum tower T	3884.00	3496
B-30	Base for HD tower	212.57	191
RFM-30	Flat roof mt for guyed tower	186.52	168
1-5/8SC	Flange bearing	90.70	81
2-3/16SC	Flange bearing	116.52	104
Top Plate	Flange plate welded to top section	21.24	19

SEE LITERATURE FOR CONFIGURATION OF TOWERS

30 Taper	30" taper tower section .....T	570.00	513
30 Straight	30" straight tower section .....T	570.00	513
1-1/4" OD x 10 ft	aluminum mast .....T	30.27	27
1-1/2" OD x 10 ft	aluminum mast .....T	37.84	34
2" OD x 8 ft	aluminum mast	45.41	41
2" OD x 16 ft	aluminum mast .....T	90.88	82

All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

VALOR (See PRO AM/Vectronics)

VANCO (VCO)

SWR-1	SWR/field strength meter	$ 36.14	19.95
SWR-2	SWR/power/field strength meter	50.15	29.95
SWR-3	Mini SWR meter	21.68	14.95

VAN GORDEN (VAN)

Hi-Q 1:1	balun	$ 14.95	
Hi-Q 4:1	balun	14.95	
Antenna center	insulator	6.95	
Antenna end	insulator .....each	3.95	
Dog bone	type antenna insulator .....each	.55	
NR-100	Nylon antenna guy rope .....100 ft.	4.49	
NR-1,000	Nylon ant guy rope .....1,000 ft.	43.95	39.95
D-80	80m wire dipole antenna	31.95	
SD-80	Short 80m dipole	35.95	
D-40	40m wire dipole antenna	28.95	
SD-40	Short 40m dipole	33.95	
D-20	20m wire dipole antenna	27.95	
D-15	15m wire dipole antenna	26.95	
D-10	10m wire dipole antenna	25.95	
All Bander	Dipole 160-10m (w/tuner) 135' ant	29.95	
Shorty	All Bander 160-10m (w/tuner) 70' ant	44.95	

VAN GORDEN - continued

		Reg	Sale
G5RV	Flat-top 5-band 102' antenna w/cable	50.00	
N connector	Type N connector for 9913	4.95	
450 ohm	18ga solid ladderline .....100 ft.	12.00	
450 ohm	18ga solid ladderline .....1,000 ft.	110.00	99.95
8X-3ST	3' RG-8X coax/silver teflon PL259s ...	8.50	
8X-6ST	6' RG-8X coax/silver teflon PL259s ...	10.00	
8X-12ST	12' RG-8X coax/silver teflon PL259s	11.00	
8X-25ST	25' RG-8X coax/silver teflon PL259s	15.50	
8X-50ST	50' RG-8X coax/silver teflon PL259s	24.00	
8X-75ST	75' RG-8X coax/silver teflon PL259s	31.00	
8X-100ST	100' RG-8X coax/silver teflon PL259s	37.00	
213-3ST	3' RG-213 coax/silver teflon PL259s	11.00	
213-6ST	6' RG-213 coax/silver teflon PL259s .	14.00	
213-12ST	12' RG-213 coax/silver teflon PL259s	18.00	
213-25ST	25' RG-213 coax/silver teflon PL259s	25.00	
213-50ST	50' RG-213 coax/silver teflon PL259s	38.00	
213-75ST	75' RG-213 coax/silver teflon PL259s	54.00	
213-100ST	100' RG-213 coax/silver teflon PL259s	72.00	

Vectronics by VALOR (VAL)

VC-300M	300w mobile antenna tuner	$139.95	119.95
VC-300DLP	300w antenna tuner	169.95	144.95
VC-300D	300w digital antenna tuner	219.95	186.95
HFT-1500	1.5kw antenna tuner	459.95	389.95
AT-100	.3-30 MHz active antenna/tuner .....m	85.95	74.95
Vector 500	600w HF amplifier .....m	1395.00	1195
HF-600QSK	1kw HF amplifier w/QSK .....m	1995.00	1595
HPF-1	High pass filter	19.95	17.95
LP-30	1.5kw low pass filter	69.95	59.95
LP-2500	2.5kw low pass filter	139.95	119.95
CK-200	Deluxe keyer .....m	89.95	79.95
DL-300M	300w dummy load	43.95	39.95
DL-650M	1.5kw dummy load	74.95	64.95
DL-2500	2.5kw dummy load	199.95	169.95
PM-30HF	300/3kw HF wattmeter	99.95	84.95
PM-30UV	30/300w VHF/UHF wattmeter	99.95	84.95

VIBROPLEX (VIB)

090	Original Gold Bug	$299.95	289.95
100	Original Presentation Super deluxe bug .	259.95	249.95
105	Original Deluxe Bug	174.95	
110	Original Standard Bug	139.95	
113	VibroKeyer Gold Paddle	279.95	269.95
115	VibroKeyer Deluxe Paddle	169.95	
120	VibroKeyer Standard Paddle	129.95	
123	Iambic Gold Paddle	279.95	269.95
125	Iambic Presentation Paddle	249.95	239.95
130	Iambic Deluxe Paddle	169.95	
135	Iambic Standard Paddle	129.95	
140	EK-1 Iambic keyer w/paddle	144.95	
145	Brass Racer Iambic paddle	89.95	

W2AU (Unadilla) (W2A)

W2AU 1:1	160-10m balun, lightning arrestor	$ 24.00
W2AU Beam	Balun, 1:1	24.00
W2AU 4:1	160-10m balun, lightning arrestor	24.00
W2DU-HF	1:1 1.8-30 MHz choke balun	26.00
W2DU Beam	Balun 40-10m 1:1 choke balun	26.00
W2DU-VHF	1:1 30-250 MHz choke balun	26.00
HA	AN-sulator center insulator	9.00
HE	END-sulator end insulators .....pair	4.95
KW-80CW	Reyco 80m CW ant traps .....pair	48.00
KW-80F	Reyco 75m phone ant traps .....pair	48.00
KW-40	Reyco 40m antenna traps .....pair	42.00
KW-30	Reyco 30m antenna traps .....pair	42.00

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W2AU - continued

	Reg	Sale
KW-20 Reyco 20m antenna traps .....pair	41.00	
KW-17 Reyco 17m antenna traps .....pair	41.00	
KW-15 Reyco 15m antenna traps .....pair	41.00	
KW-12 Reyco 12m antenna traps .....pair	41.00	
KW-10 Reyco 10m antenna traps .....pair	41.00	
W2AU/W2VS 5-band ant kit (use tuner)	85.00	

W5YI (W5Y)

	Reg	Sale
GWAM Gordon West Advanced study manual .	$ 11.95	
GWEM Gordon West Extra study manual	9.95	
GWET Gordon West Extra code tapes	9.95	
GWGM Gordon West General study manual	9.95	
GWGT Gordon West General code tapes	9.95	
GWGW Gordon West General theory tapes	9.95	
GWHC Gordon West Ham Class video	19.95	
GWNC Gordon West No-Code Tech manual	9.95	
GWNT Gordon West Novice Code Teacher	9.95	
GWNW Gordon West Novice theory tapes	9.95	
GWTW Gordon West Tech theory tapes	9.95	

WABER AC OUTLET STRIPS (WAB)

	Reg	Sale
3SP 3 outlet/breaker/switch/light .....Δm	$ 16.60	6.95
4S 4 outlet/breaker/switch .....Δm	16.60	6.95
5 5 outlet w/breaker .....Δm	16.60	6.95
6SP 6 outlet/breaker/switch/light .....Δm	19.95	8.95
7S 7 outlet/breaker/switch .....Δm	19.95	9.95

WAHL (WAH)

	Reg	Sale
7740 Quick charge cordless soldering iron kit .	$ 39.95	34.95
7980 Butane soldering iron and torch	29.95	
7985 Butane iron/torch kit package w/case...	54.95	49.95

WALNUT CREEK (WAL)

	Reg	Sale
CICA 650 MB of current Windows shareware .	$ 29.95	
Garbo 250 MB DOS + 150 MB Mac programs	29.95	
Giga Games 3,000 DOS/Windows games	39.95	29.95
Ham QRZ US & Canada calls plus programs..	29.95	
Hobbes Thousands of OS/2 applications	29.95	
Simtel 650 MB current DOS programs	34.95	29.95

WELLER (WEL)

	Reg	Sale
7200PK 75w soldering gun kit	$ 33.94	26.95
EC-1002-1 40w temp controlled solder stn ...	289.50	189.95
WP-25 25w professional soldering iron	38.36	29.95
W-60P 60w temp controlled soldering iron	73.66	59.95
WTCPT 60w temp controlled soldering stn	167.12	109.95
WSTA3 Pyropen portable LP soldering iron	121.06	74.95
WST2 Pyropen Jr. portable butane iron	97.20	64.95

YAESU (YAE)

	Reg	Sale
FT-1000MP/DC 9-band Xcvr/EDSP/tuner	3299.00	CALL
FT-1000MP 9-band Xcvr/EDSP/tuner/ps	3599.00	CALL
DVS-2 Digital voice recording module	329.00	289.95
MD-100A8X Desk mic w/tone control	139.00	129.95
MH-31B8 Extra hand microphone	40.00	
SP-8 External speaker w/filters	179.00	169.95

YAESU - continued

	Reg	Sale
LL-7 Phone patch unit for SP-8	159.00	149.95
TCXO-4 TCXO unit	119.00	109.95
TCXO-6 Deluxe TCXO unit, 0.5 ppm	249.00	229.95
YF-110CN 250 Hz 3rd IF main Rcvr CW filt .	189.00	169.95
YF-110SN 2 KHz 3rd IF main Rcvr SSB filt ..	179.00	159.95
YF-114CN 250 Hz 2nd IF main Rcvr CW filt	179.00	159.95
YF-114SN 2 KHz 2nd IF main Rcvr SSB filt .	179.00	159.95
YF-115C 500 Hz CW Collins mech filter	189.00	169.95
YH-77ST Open-air type stereo headphones .	55.00	
FT-1000 Xcvr w/ps/tuner/keyer/mic/XF-AB	4229.00	CALL
$200 coupon - FT-1000 thru 1/6/96		
BPF-1 Dual bandpass filter; crossband rcv	199.00	179.95
TCXO-1 Temperature compensated xtal osc	249.00	229.95
XF-C 2.4 KHz SSB xtal filter (455 KHz)	179.00	159.95
XF-D 2 KHz SSB xtal filter (455 KHz)	179.00	159.95
YF-110C/XF-E 500 Hz CW xtal filter (455 KHz)	179.00	159.95
FT-1000D Dlx Xcvr w/BPF/TCXO/XF-ABCDE	5359.00	CALL
$200 coupon - FT-1000D thru 1/6/96		
DVS-2 Digital voice recording module	329.00	289.95
FIF-232C Interface for RS-232	129.00	119.95
MD-1C8 Desk microphone	139.00	129.95
MD-100A8X Desk mic w/tone control	139.00	129.95
SP-5 External spkr w/audio filter	179.00	169.95
LL-5 Phone patch unit for SP-5	159.00	149.95
XF-455MC 600Hz CW filter (455KHz); subrcvr	189.00	169.95
YF-110CN/XF-F 250 Hz CW xtal filter (455 KHz) .	189.00	169.95
YH-77ST Open-air type stereo headphones .	55.00	
FT-990DC Xcvr w/tuner & mic	2319.00	CALL
$200 coupon - FT-990DC thru 1/6/96		
FP-25 Internal power supply for FT-990DC .	369.00	329.95
FP-800 20A heavy duty ps for FT-990DC	329.00	289.95
XF-109C 500 Hz CW filter for FT-990DC	149.00	139.95
FT-990 Xcvr w/ps/tuner/mic/CW filter	2759.00	CALL
$200 coupon - FT-990 thru 1/6/96		
DVS-2 Digital voice recording module	329.00	289.95
FIF-232C Interface for RS-232	129.00	119.95
MD-1C8 Desk microphone	139.00	129.95
MD-100A8X Desk mic w/tone control	139.00	129.95
SP-6 External speaker w/filter	179.00	169.95
LL-5 Phone patch unit for SP-6	159.00	149.95
TCXO-2 Temp compensated xtal oscillator ..	219.00	199.95
XF-10.9M-202-01 2nd IF 2 KHz SSB filter ..	149.00	139.95
XF-110CN 455 KHz 250 Hz CW filter	189.00	169.95
YH-77ST Open-air type stereo headphones .	55.00	
2M/767 (FEX-767-2M) 2m mod; 767 .....Δm	269.00	249.95
SP-767P Speaker/patch for FT-767GX .....Δm	139.00	129.95
FT-900 Xcvr/remote front panel/mic	1519.00	CALL
$50 coupon - FT-900 thru 1/6/96		
YSK-900 remote kit FREE with FT-900! Limited Time!		
ATU-2 Internal antenna tuner	279.00	249.95
FT-900/AT Xcvr/remote front/mic/auto tuner .	1719.00	CALL
$50 coupon - FT-900/AT thru 1/6/96		
YSK-900 remote kit FREE with FT-900/AT! Limited Time!		

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	Reg	Sale
FP-800 20A heavy duty power supply	329.00	289.95
CT-26 Mic adapter cable; modular to 8-pin	15.00	
DVS-2 Digital voice recording module	329.00	289.95
FC-800 External long wire auto tuner	539.00	469.95
FIF-232C Interface for RS-232	129.00	119.95
MD-1C8 Desk microphone	139.00	129.95
MD-100A8X Desk mic w/tone control	139.00	129.95
CT-20 Mic cable for use with MD-1C8	15.00	
MH-31A8J Extra hand microphone	40.00	
MMB-20 Mobile mount	30.00	
SP-6 External speaker w/filter	179.00	169.95
LL-5 Phone patch unit for SP-6	159.00	149.95
SP-7 Mobile speaker	39.00	
TCXO-3 TCXO unit	119.00	109.95
XF-110C 455 KHz 500 Hz CW filter	179.00	159.95
XF-110CN 455 KHz 250 Hz CW filter	189.00	169.95
XF-110S 455 KHz 2.6 KHz SSB filter	189.00	169.95
YF-100 2nd IF 500 Hz CW filter .....Dmwfv	139.00	119.95
YF-101 2nd IF 2.6 KHz SSB filter	179.00	169.95
YA-007FG Mobile fg 3-30 MHz whip ant	159.00	149.95
YH-77ST Open-air type stereo headphones .	55.00	
YSK-900 20' remote mtg kit w/tnk mtg bkt	59.00	
MMB-62 Remote control panel bracket	29.00	
FRB-757 External relay box for FT-890	39.00	
XF-455K-251-01 250Hz CW filt; FT-890 ..Dmf	189.00	159.95
FT-840 Xcvr/SW Rcvr	1099.00	CALL
$50 coupon - FT-840 thru 1/6/96		
FP-800 20A heavy duty power supply	329.00	289.95
FC-10 External coax fed auto tuner	399.00	349.95
FC-800 External long wire auto tuner	539.00	469.95
FIF-232C Interface for RS-232	129.00	119.95
FM-747 FM unit	79.00	
MD-1C8 Desk microphone	139.00	129.95
MD-100A8X Desk mic w/tone control	139.00	129.95
MMB-20 Mobile mount	30.00	
SP-6 External speaker w/filter	179.00	169.95
SP-7 Mobile speaker	39.00	
TCXO-4 TCXO unit	119.00	109.95
YA-007FG Mobile fiberglass HF whip ant	159.00	149.95
YF-112A 6 KHz AM filter	139.00	129.95
YF-112C 500 Hz CW filter	139.00	129.95
YH-77ST Open-air type stereo headphones .	55.00	
FP-757HD Hvy duty ps/fan/spkr; FT-757 .Dmf	349.00	269.95
FP-700 Power supply	279.00	239.95
FC-757AT Auto ant tuner w/memory	585.00	499.95
TCXO-747 Increased stability unit; 747 .....Δf	42.00	34.95
FL-7000 Solid state amp w/auto ant tuner	2459.00	CALL
CT-11 Cable - FL-7000 to FT-890/900	20.00	
E-767 Cable - FL-7000 w/FT-767/990/1000	25.00	
FAS-1-4R Remote antenna selector	149.00	139.95
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XF-455M6 600 Hz CW filter; FT-650 ...Δmwfv	169.00	139.95
YA-30 1.8-30 MHz broadband dipole ant	255.00	219.95
YH-55 Lo-Z headphones	40.00	
YH-77 Lightweight headphones	34.00	
YS-60 1.8-60 MHz 2kw PEP wattmeter	139.00	129.95
YS-500 140-520 MHz 200w PEP wattmeter	119.00	109.95
FT-736R 25w 2m/430 full dplx Xcvr/ps/mic	2349.00	CALL
AD-3 100w 2m/440 duplexer	56.00	
E-736 DC cable	15.00	
FEX-736-50 6m module	349.00	309.95
FEX-736-220 220 MHz module	369.00	329.95
FEX-736-1.2 1.2 GHz module	619.00	539.95
FIF-232C Interface for RS-232	129.00	119.95
FTS-8 Encoder/decoder	59.00	
FVS-1A Voice synthesizer	39.00	
Keyer-B Electronic keyer unit	29.00	
MD-1C8 Desk microphone	139.00	129.95
MH-1B8 Extra hand microphone	39.00	
SP-767 Speaker w/audio filters	119.00	109.95
TV-736 1.2 GHz ATV converter	179.00	159.95
FT-690R Mk II 10w 6m FM/SSB Xcvr/TTP	889.00	CALL
FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP	749.00	CALL
FT-790R Mk II 25w 430-450 FM/SSB/TTP	869.00	CALL
CSC-19 Soft case	23.00	
FBA-8 Holder for 9 C-cell nicads	44.00	
NC-26B Wall charger for FBA-8	14.00	
FTS-7A Encoder/decoder; current units	42.00	
FT-5100 50/35w 2m/440 FM Xcvr/TTP mic	799.00	CALL
$30 coupon - FT-5100 thru 1/6/96		
FT-5200 50/35w 2m/440 FM Xcvr/TTP mic	839.00	CALL
$40 coupon - FT-5200 thru 1/6/96		
FT-6200 35/10w 440/1.2GHz FM Xcvr/TTP	899.00	CALL
DVS-3 Digital voice memory unit	149.00	139.95
FRC-4 DTMF pager unit	45.00	
FTS-22 CTCSS decode unit	65.00	
MH-27B8 Extra TTP mic w/8-pin plug	61.00	
MW-2* Wireless remote control mic	149.00	139.95
* Requires jumper modification		
MMB-53 Mobile mtg bkt for MW-1/2	7.00	
SP-7 External speaker	39.00	
YSK-1L Sep kit w/18' cable; FT-5200/6200	59.00	
FT-8500 50/35w 2m/440 FM Xcvr/TTP mic	849.00	CALL
$30 coupon - FT-8500 thru 1/6/96		
ADMS-2 Windows prog software; FT-8500	39.00	
FTS-22 CTCSS decode unit	65.00	
MH-27B8 TTP mic w/8-pin plug	61.00	
MEK-2 Mic adapter kit for MH-27B8	39.00	
MMB-60 Quick release mobile bracket	26.00	
SP-7 External speaker	39.00	
YSK-8500 Remote separation kit	99.00	
MMB-62 Remote control panel bracket	29.00	
FT-912RH 10w 1.2 GHz FM Xcvr w/TTP mic	749.00	CALL
AD-3 100w 2m/440 duplexer	56.00	
DVS-1 Dig voice mem module; 212/712/912 Δmwfv	109.00	19.95
FTS-12 Decoder; 212RH/712RH/912RH	61.00	
MH-15C8 Extra TTP microphone	56.00	
MH-15D8 Autodial TTP microphone	82.00	
FT-7400H 35w 440 FM Xcvr w/TTP mic	609.00	CALL
2400 Mic Cable 2' packet cable	9.00	
FRC-6 DTMF pager unit	45.00	
FTS-17A CTCSS decode unit	62.00	
MH-27A8J Extra TTP mic w/modular plug	64.00	
SP-7 External speaker	39.00	
FT-2500M 50w 2m FM Xcvr w/TTP mic	459.00	CALL
$30 coupon - FT-2500M thru 1/6/96		
2400 Mic Cable 2' packet cable	9.00	
FT-2200 50w 2m FM Xcvr w/TTP mic	489.00	CALL
$40 coupon - FT-2200 thru 1/6/96		
FT-7200 35w 440 FM Xcvr w/TTP mic	619.00	CALL
DVS-3 Digital voice memory unit	149.00	139.95
FTS-27 CTCSS decode unit	61.00	
MW-2 Wireless remote control microphone	149.00	139.95
MMB-53 Mobile mtg bkt for MW-2	7.00	
SP-7 External speaker	39.00	
SP-3 Small mobile speaker	24.00	

YAESU - continued

	Reg	Sale
SP-4 Mobile speaker	32.00	
VXR-5000VADC 25w 2m FM repeater	1399.00	CALL
VXR-5000UCDC 25w 440 FM repeater	1399.00	CALL
MR-KIT1 19" rack mtg kit; VXR repeater	218.00	199.95
PROG DISK-A Rptr programming software	15.00	
VX VPL-1 PC programming cable	55.00	
Accessories for FT-208R/708R		
FNB-2A Nicad battery pack	$ 53.00	
YM-24A Speaker/microphone ....Dm	39.95	
Accessories for 09-series/03-series		
FNB-4A 500ma 12v battery	$ 65.00	
FTS-6 Encoder/decoder; 09-series ....Dm	56.00	
NC-9B Wall charger for FNB-3/3A ....Dm	14.00	
PA-3 Mobile adapter and charger ....Dm	28.00	
FT-76/25 2w 440 FM HT/batt/cgr ....Dw	329.00	239.95
FT-530 2m/440 FM HT/batt/cgr/TTP	589.00	CALL
$70 coupon - FT-530 thru 1/6/96		
CA-8 2 charging sleeves; NC-50/416/530	25.00	
CLIP-3 Belt clip	7.00	
CSC-50 Vinyl case; 415/416/FNB25 .Δmwv	22.00	
CSC-52 Case; 415/416/FNB26/27 ...Δmwfv	22.00	
CSC-53 Vinyl case; 26/76/FNB-25 ....Δmwv	22.00	9.95
CSC-55 Case: 26/76 w/FNB-26/27 ....Δmwf	22.00	9.95
CSC-56 Vinyl case; 530 w/FNB-25	22.00	
CSC-58 Vinyl case; 530 w/FNB-26/27	22.00	
EDC-5B DC adapter w/noise filter	25.00	
EDC-6 DC adapter; plug & wire only	7.00	
FBA-12 AA cell holder	23.00	
FNB-25 600ma 7.2v nicad battery	55.00	
FNB-26 1000ma 7.2v nicad battery	83.00	
FNB-27 600ma 12v nicad battery (5w)	83.00	
FTS-17A CTCSS encode/decode unit	62.00	
MH-12A2B Speaker/microphone	50.00	
MH-19A2B Earpiece/microphone	46.00	
MH-29A2B LCD display spkr/mic; 530	109.00	
MH-32A2B Compact lapel speaker/mic	40.00	
MMB-54 Mobile mtg bracket; FT-26/530	26.00	
NC-18B Wall charger for FNB-27	16.00	
NC-28B Wall charger for FNB-25/26	16.00	
NC-50 1-hour dual slot charger	109.00	
YH-2 Lightweight VOX headset w/mic	35.00	
FT-23R-17 2.5w 2m FM HT/FNB-17/cgr	277.00	CALL
FT-23R-12 5w 2m FM HT/FNB-12S/cgr	295.00	CALL
FT-33R 5w 220 FM HT/batt/cgr	369.00	CALL
FT-411E 2.5w 2m FM HT/FNB-17/cgr/TTP	368.00	CALL
FT-811 2w 440 FM HT/batt/cgr/TTP ....Dmwfv	394.00	199.95
FT-911 1w 1.2 GHz FM HT/batt/cgr/TTP	569.00	CALL
Accs for FT-23R/33R/73R/411E/811/470/911		
CA-7 2 charging sleeves; NC-50/411E/470	$ 25.00	
CLIP-1 Belt clip	8.00	
CSC-28 Soft case; 23R/33R/73R w/FNB-12S	22.00	
CSC-35 Soft case; FT-411E w/FNB-17	22.00	
CSC-37 Soft case; FT-411E w/FNB-12S/14	22.00	
CSC-43 Soft case; FT-470 w/FNB-9/17	22.00	
CSC-45 Soft case; FT-470 w/FNB-12S/14	22.00	
CSC-48 Soft case; 23R/33R/73R w/FNB-17	22.00	
FBA-17 AA battery holder	25.00	
FNB-12S 600ma 12v (5w) battery	71.00	
FNB-14 1000ma 7.2v battery	71.00	
FNB-17 600ma 7.2v battery	52.00	
FTS-12 Encoder/decoder for FT-23R/33R/73R	61.00	
FTS-17A Tone squelch/pager; FT-411E	62.00	
FTT-4 DTMF (TTP) unit for FT-23R	61.00	
MH-12A2B Speaker/microphone	50.00	
MH-19A2B Earpiece/microphone	46.00	
MH-32A2B Compact lapel speaker/mic	40.00	
MMB-32A Mobile hanger; not FT-470 ....Dmf	14.00	12.95
MMB-46 Mobile hanger for FT-470	15.00	
MMB-54 Mobile mtg bracket	26.00	
NC-18B Wall charger for FNB-12S	16.00	
NC-28B Extra wall charger for FNB-9/10/17	16.00	
NC-29 Desk quick cgr; FNB-12S/14/17	77.00	
NC-34B Wall charger for FNB-14	15.00	
NC-37 1-hr desk cgr; FNB-12S/14/17 ....Dmf	125.00	
PA-6 Mobile DC adapter/cgr; FNB-9/10/14/17	30.00	
YH-2 Lightweight VOX headset w/mic	35.00	

YAESU - continued

	Reg	Sale
FT-10/40B-A06 2.5w 2m HT/6 keypad/30 ch	309.00	CALL
FT-10/41B-A06 5w 2m HT/6 keypad/30 ch	319.00	CALL
FT-10/40B-A16 2.5w 2m HT/16 key/30 ch	339.00	CALL
FT-10/41B-A16 5w 2m HT/16 keypad/30 ch	349.00	CALL
FT-10/40B-A16D 2.5w 2m HT/16 key/99 ch	369.00	CALL
FT-10/41B-A16D 5w 2m HT/16 keypad/99 ch	379.00	CALL
FT-10/40B-A16S 2.5w 2m/16key/99ch/DVRS	389.00	CALL
FT-10/41B-A16S 5w 2m/16 key/99 ch/DVRS	399.00	CALL
FT-40/40B-A06 2w 440 HT/6 keypad/30 ch	339.00	CALL
FT-40/41B-A06 5w 440 HT/6 keypad/30 ch	349.00	CALL
FT-40/40B-A16 2w 440 HT/16 key/30 ch	369.00	CALL
FT-40/41B-A16 5w 440 HT/16 keypad/30 ch	379.00	CALL
FT-40/40B-A16D 2w 440 HT/16 key/99 ch	399.00	CALL
FT-40/41B-A16D 5w 440 HT/16 keypad/99 ch	409.00	CALL
FT-40/40B-A16S 2w 440/16key/99ch/DVRS	419.00	CALL
FT-40/41B-A16S 5w 440/16 key/99 ch/DVRS	429.00	CALL
ADMS-1B Windows programming software	39.00	
CA-14 2 charging sleeves; NC-50/FT-10	25.00	
CSC-68 Soft case; FT-10/FNB-41/FBA-15	22.00	
CSC-69 Soft case; FT-10/FNB-40	22.00	
CT-30 Microphone Y adapter	10.00	
EDC-5B DC adapter w/noise filter	25.00	
EDC-6 DC adapter; plug & wire only	7.00	
FBA-15 AA battery holder	23.00	
FNB-40 650ma 6v battery	47.00	
FNB-41 600ma 9.6v (5w) battery	57.00	
FTT-10/A06 6-key keypad/encoder/30 ch	29.00	
FTT-10/A16 16-key keypad/encoder/30 ch	39.00	
FTT-10/A16D 16-key keypad/enc/dec/99 ch	69.00	
FTT-10/A16S 16-key pad/enc/dec/99ch/DVRS	89.00	
MH-34A2B/MH-34B4B Speaker/mic	40.00	
NC-50 1-hour dual slot charger	109.00	
RH-1 Rubber case protector	7.00	
VC-23 VOX headset	59.00	
FT-11R 1.5w 2m FM HT/FNB-31/cgr/TTP	389.00	CALL
FT-11R/HP 5w 2m FM HT/FNB-38/cgr/TTP	399.00	CALL
$30 coupon - FT-11R//FT-11R/HP thru 1/6/96		
FT-41R 1.5w 440 FM HT/batt/cgr/TTP	479.00	CALL
$30 coupon - FT-41R thru 1/6/96		
FT-51R 2w 2m/440 FM HT/FNB-31/cgr/TTP	609.00	CALL
FT-51R/HP 5w 2m/440 FM HT/FNB-38/cgr/TTP	629.00	CALL
$30 coupon - FT-51R//FT-51R/HP thru 1/6/96		
51R Clone/CT-51 Clone cable; FT-11/41/51R	9.00	
ADMS-1B Windows programming software	39.00	
CA-10 2 charging sleeves; NC-50/11/41/51R	18.00	
CD-2 Mobile rapid charger; FT-11/41/51R	99.00	
CSC-61 Case; 11R/41R/FNB-33/38/FBA-14	22.00	
CSC-62 Soft case for FT-11R/41R/FNB-31	22.00	
CSC-66 Soft case; FT-51R/FNB-33/38/FBA-14	22.00	
CSC-67 Soft case for FT-51R/FNB-31	22.00	
EDC-12 DC adapter; FT-11R/41R/51R	39.00	
FBA-14 AA battery holder	23.00	
FNB-31 600ma 4.8v battery	57.00	
FNB-33 1200ma 4.8v battery	83.00	
FNB-38 600ma 9.6v (5w) battery	83.00	
FTS-26 CTCSS decoder	59.00	
MH-12A2B Speaker/microphone	50.00	
MH-19A2B Earpiece/microphone	46.00	
MH-29A2B LCD display spkr/mic; 51R	109.00	
MH-32A2B Compact lapel speaker/mic	40.00	
NC-34B Wall charger for FNB-33	15.00	
NC-38B Wall charger for FNB-38	16.00	
NC-55B Wall charger for FNB-31	15.00	
NC-50 1-hour dual slot charger	109.00	
PA-10A Mobile drop-in adapter/cgr	66.00	
VC-22 Headset w/VOX	59.00	
ANTENNA ROTORS		
G-450XL 10 sq ft antenna rotor	$269.00	CALL
G-500A 12 sq ft elevation rotor/8-wire	319.00	CALL
G-800S Med/hvy duty 450 degree 17sq ft/5-wire	379.00	CALL
$25 coupon - G-800S thru 1/6/96		
G-800SDX Med/hvy duty 17sq ft/presets/5-wire	483.00	CALL
$25 coupon - G-800SDX thru 1/6/96		
G-1000SDX HD 450 degree 23sq ft/presets/5-wire	589.00	CALL
$25 coupon - G-1000SDX thru 1/6/96		
G-2800SDX HD 450 degree 34sq ft/presets/8-wire	1329.00	CALL
$25 coupon - G-2800SDX thru 1/6/96		
G-5400B Light/med 11sq ft az/el//2x8-wire	609.00	CALL

YAESU - continued

	Reg	Sale
Sep Kit Separation kit for G-5400B	30.00	
GC-038 Mast clamp; 400/800/1000/5400B	30.00	
GC-048 Mast clamp; G-2700/2800SDX	45.00	
GS-050 50mm thrust bearing; mast 1¼-2"	35.00	
GS-065 65mm thrust bearing; mast 1½-2½"	52.00	
GS-23 Interface; G-800/1000/2700SDX	345.00	299.95
GS-232 Interface for G-5400B	547.00	469.95

See BELDEN for rotor cable

ZENITH (ZEN)

A-8477 75 ohm high-pass filter .....Dmwfcv	9.95

zm Xpressions (ZMX)

What is your TNC doing? Book	$ 15.00

CLOSE-OUTS

AEA AVT Master video system; Amiga.....mwfv	169.95
ALI DJ-F1T 2w 2m FM HT/TTP .....mwv	248.95
ALI DJ-F1T/HP 5w 2m FM HT/TTP .....mf	268.95
ALI DJ-580T 2.5w 2m/440 HT w/coupon,mwfv	373.95
ALI DR-1200T 25w 2m FM data radio ...mwfv	229.95
ALI DR-1200TH 25w 2m 9600 baud only mwfv	259.95
B&K 541 Component comparator .....m	299.95
B&K 1646 0-16V, 0-10A power supply .....m	349.95
CMT 5D-FB 100m ¼" coax .....m	69.95
CMT CD-160H 1.6-60MHz 2kw SWR/power..m	109.95
CMT CD-270 140-525MHz 200w SWR/pwr...m	99.95
CMT CX-902 2m/440/1.2 base ant .....wv	119.95
COB RD-3170 Superhet radar detector .....m	69.95
COB RD-4120 Superhet radar detector .....m	39.95
COB RDL-412 Radar/laser detector .....mw	99.95
COB SR-11 10 ch prog pocket scanner .....mf	69.95
COU PROCOM 2w VHF FM HT .....mwf	139.95
COU U-22 UHF HT - specify channel.....mf	149.95
CUS 220-QK Stack kit; 4 220B .....f	89.95
CUS 424B 432 24 el Boomer antenna .....wv	129.95
CUS PS-4 Remote polarity switch .....mf	89.95
DIA CP-4A 40/20/15/10m vertical ant.....mw	129.95
DRA R-8 Shortwave receiver .....wv	899.95

CLOSE-OUTS - continued

	Reg	Sale
GRU Cosmopolit Port AM/FM/SW Rcvr.....fv		149.95
GRU Yacht Boy 206 Port AM/FM/SW Rcvr.mwv		79.95
GRU Yacht Boy 230 Port AM/FM/SW Rcvr....m		89.95
GRU Yacht Boy 235 Port AM/FM/SW Rcvr..mfv		99.95
ICO AD-15A Power supply; R-100 Rcvr ..mwfv		29.95
ICO AH-2A Antenna tuning system .....mwfv		499.95
ICO AH-610 Dual band 6/10m base ant .mwf		129.95
ICO AT-160 Auto tuner; IC-707/728 .....mwfv		269.95
ICO BC-50 Desk charger; IC-u2AT .....m		49.95
ICO BC-80 Desk charger; P-series .....mwfv		149.95
ICO BP-21 7.2v 120ma batt; IC-u2AT .....m		24.95
ICO BP-114 12v 400ma 5w batt; P-series mwfv		109.95
ICO BP-123 7.2v 1200ma batt; IC-2iA ....mfv		99.95
ICO BP-124 12v 400ma batt; IC-2iA .....mf		116.95
ICO EX-20 6/10m auto ant selector .....m		99.95
ICO EX-202 LDA bandswitch unit; IC-730 ..m		14.95
ICO EX-205 Xvtr switching unit; IC-730 .....m		9.95
ICO EX-241 Marker unit for IC-745 .....m		29.95
ICO EX-242 FM unit for IC-745 .....m		49.95
ICO EX-627 HF auto ant selector .....mwfv		299.95
ICO FL-53 250Hz CW filter; IC-740 .....m		39.95
ICO FL-54 270Hz CW filter; IC-730/740/745 m		39.95
ICO HS-15 Goose neck mobile mic .....mwf		19.95
ICO HS-15SB PTT switchbox .....mf		14.95
ICO IC-P4AT 440 FM HT/TTP .w/coupon,mwfv		219.95
ICO IC-U18 16 ch 5w UHF FM prog HT.....m		329.95
ICO IC-U400 16 ch 35w UHF keybrd mobile.m		449.95
ICO IC-W21AT 2m/440/spkr/mic w/coupon,mwfv		359.95
ICO IC-3SAT 2w 220 FM HT/TTP .....mwfv		338.95
ICO IC-4iA 440 FM HT .....m		169.95
ICO IC-575H 100w 6/10m FM/SSB Xcvr .....m		1599
ICO IC-737A HF Xcvr/keyer/auto tuner.....mwf		1299
ICO M-2 5w VHF marine HT.....mwf		299.95
ICO M-5 5w VHF marine HT.....mw		349.95
ICO PS-30 20A systems power supply .....mf		349.95
ICO PS-45 Compact 8A power supply .....m		149.95
ICO RP-4020 25w 440 FM repeater .....mwv		1699
ICO TV-970 1.2GHz ATV adapter; 970 .....wfv		349.95

CLOSE-OUTS - continued

	Reg	Sale
ICO UX-S92A 2m SSB module; IC-901.....mf		199.95
ICO UX-39A 220 unit for IC-901 .....m		199.95
ICO UX-R96 Extended receive unit; 970 ....mv		369.95
KAN Anemometer Wind speed sensor .....mfv		119.95
KAN KPC-2 Packet controller .....mv		159.95
KAN KTU Weathernode unit/temp sens ...mwv		229.95
KEN PB-14 12v 300ma 5w nicad .....mwfv		69.95
KEN PS-31 Power supply; TS-790A .....mwfv		179.95
MFJ 45C 512K RAM IC only ..... mw		119.95
MFJ 1273 Packet tuning indicator .....mwfv		19.95
MFJ 1278T Turbo controller w/2400 .....m		249.95
MFJ 2040 Repeater controller.....wv		229.95
NYE 047-001 4-pin phone patch .....mfv		99.95
NYE 047-003 8-pin phone patch w/spkr .....w		144.95
OPT 8040 Multifunction counter/timer ..mwfv		549.95
PAL P-405 9V HF receiver preamp .....mwfv		89.95
PAL P-408 AC HF receiver preamp.....mwf		109.95
PAL PF-300 SC audio filter .....mfv		119.95
SAN ATS-808 AM/FM/SW port Rcvr .....mf		149.95
SON ICF-SW15 AM/FM/SW port receiver ...mv		69.95
STA C-158A 2m FM HT/TTP .....w/coupon,mw		209.95
STA C-188A 2m FM HT/TTP .....w/coupon,wfv		259.95
STA CCR-708A 50-905 spectral disp Rcvr mwfv		739.95
UNI BC-2500XLT 25-1300MHz pocket .....mfv		299.95
UNI BCT-2 Preprog mobile scanner .....mf		109.95
HH-978XL 5w VHF marine handheld .....mwf		129.95
YAE 2M/767 2m module for FT-767GX .....m		249.95
YAE DVS-1 Dig voice memory module ....mwfv		19.95
YAE FP-757HD HD ps/fan/spkr; FT-757 .....mf		269.95
YAE FT-76/25 440 FM HT .....w		239.95
YAE FT-811 2w 440 FM HT/TTP.....mwfv		199.95
YAE NC-37 1-hr desk cgr; FNB12S/14/17 ..mf		125.00
YAE XF-455K-251-01 250Hz CW filter .....mf		159.95
YAE XF-455M6 600 Hz CW filter; FT-650 mwfv		139.95
YAE YF-100 500 Hz CW filter .....mwfv		119.95
ZEN A-8477 75 ohm high-pass filter ...mwfcv		9.95

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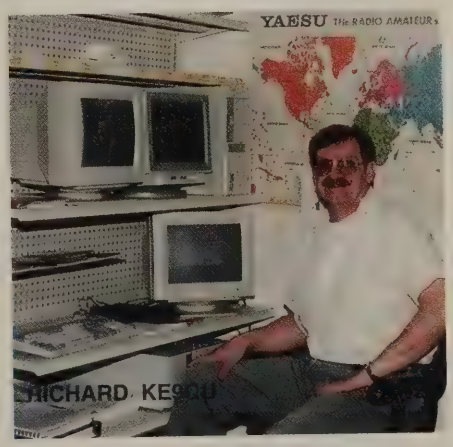
Richard Engel, KE9QU is our sysop. Richard, an AES® employee for over 11 years, was licensed in 1969. He is very knowledgeable in all phases of amateur radio, especially Digital Communications.



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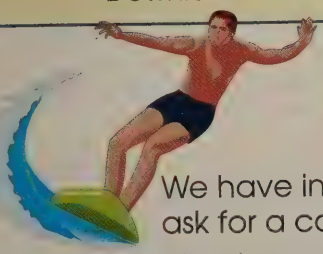

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AES® Consumer Equipment Price List

CORDLESS PHONES

COBRA (COB)

	Reg	Sale
CP-706 Ivory cordless phone w/scrambler	$129.95	89.95
CP-912 900MHz 100ch dig spread spectrum	369.95	269.95

UNIDEN (UNI)

CT-301 Cordless phone	$ 69.95	49.95
DX-3555 25 ch scrambled dual pad cordless	159.95	119.95
DX-4519 25 ch scrambled cordless phone	129.95	99.95
EXP-910 900 MHz digital spread spectrum	459.95	289.95
XC-3510 25 ch cordless phone	109.95	89.95

CB RADIO

Antenna Specialists (ASP)

MR125 Rooftop antenna, spring, 3/8" hole	$ 41.95
MT178 Magnet mt antenna	49.25
M-906 Cellular style on glass CB antenna	49.95

COBRA (COB)

7 Ultra AM Mobile	$ 62.95	49.95
10 SOS Kit AM Mobile w/magnet mt ant	89.95	59.95
18 Ultra AM Mobile	109.95	69.95
19DX AM Mobile	79.95	49.95
19LTD II AM Mobile	79.95	59.95
23 Plus AM Mobile w/WX	109.95	69.95
25LTD (25 Classic) AM Mobile	159.95	99.95
25LTD WX AM Mobile w/WX	179.95	109.95
29LTD (29 Classic) AM Mobile	199.95	129.95
29LTD WX AM Mobile w/WX	219.95	139.95
HH-70 AM Remote	169.95	109.95
CK-6712 12' extension cable	22.95	
148GTL SSB/AM Mobile	329.95	189.95
2010GTL WX SSB/AM Base w/WX	659.95	419.95
HH-35 AM portable CB Xcvr	89.95	69.95
HH-40 5w 40 ch 27 MHz CB walkie-talkie	159.95	99.95
AT-60 Trunk lip/roof mt antenna	29.95	
AT-70 Magnet mt antenna	29.95	

UNIDEN (UNI)

PC-66XL AM Mobile	$129.95	89.95
PC-76XL AM Mobile	179.95	119.95
PC-76XLW AM Mobile w/WX alert	189.95	139.95
PRO-340XL 40 ch portable w/rubber ant	89.95	59.95
PRO-501XL AM Mobile	49.95	39.95
PRO-501AXL AM Mobile w/magnet mt ant	69.95	49.95
PRO-510XL AM Mobile	69.95	44.95
PRO-520XL AM Mobile	89.95	59.95
PRO-538W AM Mobile w/WX	109.95	74.95
PC-122XL SSB/AM Mobile	199.95	129.95
Grant-XL SSB/AM Mobile	269.95	169.95
Washington SSB/AM Base	349.95	249.95
ESP-25 External speaker	20.89	

SCANNERS

AOR (AOR)

AR-2700 .5-1300MHz hand Rcvr/cell blkd	$499.95	399.95
AR-3000A .1-2036MHz dlx w/SSB/cell blkd	1329.95	1069
SDU-5000 Spec disp; AR3000A/Icom Base	1199.95	899.95
AR-8000 .5-1900MHz hand w/SSB/cell blkd	799.95	599.95

Antenna Specialists (ASP)

MONR1 H or U low profile roof mt monitor ant	$ 23.50
MON-9 H & U magnet mt monitor antenna	35.25
MONR31 L/H/U gain ground plane base ant	55.25

BMI (BMI)

Nitelogger Auto recorder activator ....Dmwv	$ 69.95
RC-1A Impedance matching patch cord	19.95

CHANNEL MASTER (CHA)

5094A 4-band base Monitenna ant w/50' coax	$ 47.69	39.95
5095A Kit w/5094A ant, 5' tri-mast, 50' coax	59.39	49.95

COBRA (COB)

SR-11 10 ch prog pocket scanner ....Dmf	$219.95	69.95

GROTHE (GRO)

VS-2 Emergency vehicle siren	$ 99.00	89.95
VS-2L/A Window mt siren/amber light	249.00	
VS-2L/B Window mt siren/blue light	249.00	
VS-2L/R Window mt siren/red light	249.00	
VS-2LS/A Window mt siren/amber strobe	299.00	

GROTHE - continued

	Reg	Sale
VS-2LS/B Window mt siren/blue strobe	299.00	
VS-2LS/R Window mt siren/red strobe	299.00	
VS-3 Volunteer vehicle PA/horn w/spkr	159.00	129.95
VS-4 P/A emergency vehicle siren w/spkr	169.00	139.95

MAXON (MAX)

WX-70 Weather monitor w/alert	$ 69.95	49.95

UNIDEN BEARCAT (UNI)

BCT-2 Pre-prog warning scan/AC ps ....Dmf	$239.50	109.95
BC-147XLT-1 16 ch prog scanner/instant WX	169.95	89.95
BC-148XLT-1 16 ch prog scanner/WX alert	179.95	99.95
BC-178XLT 100 ch prog scan/air/WX alert	249.95	139.95
BC-350A 50 ch prog/service search w/AC ps	199.95	109.95
BC-560XLA 16 ch prog scanner/AC ps Dmwfv	169.95	89.95
BCT-7 Pre-prog warning scan/air/800/AC ps	319.95	179.95
BC-700A 50 ch prog/svc search/800/AC ps	299.95	159.95
BC-760XLT 100 ch prog/svc search/800/AC ps	369.95	209.95
BC-002 CTCSS tone board; BC-760XLT	51.89	
BC-003 Switch box for BC-002	10.70	
BC-004 RF preamp for BC-760XLT	27.80	
BC-860XLT 100 ch prog scanner/air/800	319.95	169.95
BC-890XLT 200 ch 956 MHz scanner/WX alert	439.99	239.95
BC-002 CTCSS tone board; BC-890XLT	51.89	
BC-9000XLT 500 ch 25MHz-1.3GHz	769.95	399.95
BC-005 CTCSS tone board; 8500/9000XLT	37.89	
BC-60XLT 10 ch prog pocket scanner	169.95	99.95
AD-100 AC adapter/batt cgr	16.89	
PS-001 DC power cord	8.89	
BC-80XLT 50 ch prog pocket scanner/800	309.95	159.95
BP-70 Extra battery for BC-70XLT ....Δmv	27.80	
AD-140 Extra charger; BC-100XLT/200XLT	13.29	
BP-200 Extra battery; BC-200XLT	32.82	
BP-205 Extra battery; BC-100XLT	37.23	
VC-001 Carrying case; BC-55XLT ....Δmfv	8.89	4.95
BC-120XLT 100 ch prog pocket w/aircraft	249.95	139.95
BC-220XLT 200ch prog pocket/800 MHz Dmwfv	439.95	229.95
BC-230XLT 200 ch prog pocket/air/800 MHz	439.95	249.95
SC-150B 100 ch black sport pocket/800	329.95	179.95
AD-70 Extra charger	13.49	
BP-120 Extra battery	18.29	
LC-120 Carrying case for BC-120/220XLT	19.59	
LC-150B Carrying case for SC-150B	19.59	
UA-502 Cig power cord	12.19	
BC-2500XLT 400ch poc/25MHz-1.3GHz .Dmfv	669.95	299.95
BC-3000XLT 400 ch 25MHz-1.3GHz pocket	699.95	379.95
BP-2500 Extra batt; BC-2500/3000XLT	32.49	
NPD-001 National frequency book	14.95	
RFD-001 IN/IL/KY/OH/MI/WI freq book	14.95	

RADAR DETECTORS

COBRA (COB)

LD-200 Laser detector ....Dmw	$ 79.95	49.95
RD-302 3-band wide band detector ....Dmwf	129.95	49.95
RD-3170 Deluxe superhet detector ....Dm	299.95	69.95
RD-4120 Super heterodyne detector ....Dm	209.95	39.95
RD-6000 Solar powered radar detector ....Dm	319.95	79.95
RDL-412 Radar/laser detector ....Dmw	199.95	99.95
RDL-512 Radar/laser detector ....Dmwf	159.95	119.95

LAND MOBILE

COURIER (COU)

Procom* 2w VHF FM hand-held/batt/cgr Δmwf	$199.95	139.95
ANT-2 Extra BNC flexible antenna ....Δm	12.00	9.95
AUC-12 Cig lighter charger adapter ..Δmwf	12.00	7.95
CAT-12 Leather carrying case ....Δmw	22.50	16.95
RB-7 Extra nicad battery pack ....Δmw	32.00	29.95
RSM-1 Speaker/mic ....Δmf	37.50	32.95

*Available in one of three frequencies:
Freq **A** (red) - 151.625 MHz Freq **B** (blue) - 154.570 MHz
Freq **C** (green) - 154.600 MHz

M-54 5w 4ch VHF FM hand-held/batt/cgr/151.625	299.95	199.95
M-510 5w 10ch synth VHF FM hand-held	399.95	269.95
MU-510 5w 10ch synth UHF FM hand-held	439.95	299.95
CCK-510 Cloning cable for M-510/MU-510	14.00	
U-22* 2w 2ch UHF FM hand-held/batt/cgr Dmf	279.95	149.95

*Available in one of four frequencies:

COURIER - continued

	Reg	Sal
Frequency **A** (white) - 462.575 MHz		
Frequency **B** (black) - 462.625 MHz)		
Frequency **C** (orange) - 462.675 MHz (REACT)		
Frequency **E** (yellow) - 464.550 MHz (business radio svc)		

ICOM (ICO)

IC-U18 16ch 5w UHF HT; 450-460 or 460-470 ..Dm	$849.00	329
UT-14 Tone unit ....Dm	115.00	19
IC-U400 16 ch 35w UHF keyboard mobile Dm	882.00	449
IC-F10-1 2w 146-174MHz 24 ch HT	495.00	399
IC-F20-2 2w 440-470MHz 24 ch HT	559.00	449
AD-54 Charger adapter; BM113U; F10/F20	34.00	
BM-113U Trickle charger; F10/F20	26.00	
EX-1690 PC prog software; F10/F20	40.00	
OPC-478 PC prog cable; F10/F20	43.00	
OPC-474 HT - HT cloning cable; F10/F20	15.00	
A-3 5w PEP aircraft handheld	714.00	539
A-22 5w PEP compact Navicom air handheld	792.00	599
A-200 Panel mt aircraft Xcvr special order	1253.00	979

MAXON (MAX)

MX-49FX 5 ch 49 MHz ear mic Xcvr	$ 89.95	59
MX-49HX 5 ch 49 MHz euro-design headset Xcvr	89.95	49
MX-49SX* 49 MHz euro-design headset Xcvr	59.95	29

*Available in channels **A**, **B**, & **E**; limited qty's in channel **D**

PC-10* 49 MHz hand-held/PTT/VOX headset	59.95	39

*Available in channels **A**, **B**, & **E**

PC-50 5ch 49MHz hand-held/PTT/VOX headset	89.95	59
GMRS-10 100mw 462.625 MHz handheld	129.95	99

RANGER (RAN)

RCI-1000* 1w 2ch VHF FM hand-held/batt/cgr	$199.00	139.95
BT-10 Extra nicad batteries	29.95	24.95
DG-10 Desk charging stand (use wall cgr)	14.95	
LC-1000 Leather case	24.95	19.95
MT-17 CTCSS encoder/decoder	54.95	49.95
SRA-106A Speaker/mic	44.95	39.95

*Available in one of two frequency combinations:
A (red) - 151.625 & 154.570 MHz
C (green) - 154.600 & 154.570 MHz

MARINE VHF FM RADIO

ICOM (ICO)

M-2 5w synthesized marine hand-held .Dmwf	$659.00	299.95
M-5 5w synth hand-held w/9 mem ....Dmw	725.00	349.95
CA-1 Extra flexible antenna ....Δm	20.00	
IC-M10A 3w marine hand-held w/AA holder	350.00	219.95
GP-22 GPS unit	500.00	CALL

MAGELLAN (MAG)

GPS-2000 GPS receiver	$279.99	199.95
Meridian XL GPS/track plotter/detach ant/case	399.00	299.95

MOTOROLA (MOT)

HSN9690 Hailer speaker ....Δm	$ 40.00	19.95

RANGER (RAN)

RCI-6060 25w VHF marine Xcvr w/scan	$279.00	169.95
RCI-9000 5w 90ch VHF marine handheld Dmw	299.00	189.95
RCI-8000 5w VHF marine handheld	279.00	169.95

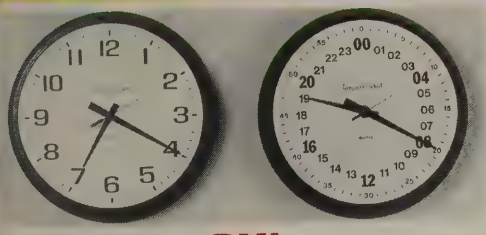
UNIDEN (UNI)

MC-535 25w 90 ch VHF marine Xcvr	$199.99	139.95
MC-635 25w 90 ch VHF marine Xcvr w/scan	249.99	149.95
MC-795 25w 90 ch VHF marine Xcvr w/prog	299.99	169.95
HH-978XL 5w 90ch VHF marine handheld Dmwf	279.99	129.95
HH-979 5w 90 ch marine hand-held/scan	259.99	159.95
HH-980 5w 90 ch deluxe marine hand-held	399.99	249.95

SHAKESPEARE (SHA)

396-1 3 db, 5' antenna, less mount	$104.95	59.95
497 6 db, 8' antenna, less mount	86.50	49.95
5202 6 db ant w/chrome ferrule, less mt	130.50	69.95
5206-C Economy 8' ant w/chrome ferrule, no mt	56.95	39.95
366H Chrome zamac ratchet mount	41.95	29.95
495 White plastic lift & lay mount	20.95	14.95
420 3 db, 5' ant w/fold-down mount	94.50	59.95
420-M-2 3 db, 5' mast mount antenna Δmwf	113.50	24.95
5204-8 Combo CB/VHF marine 8' antenna	188.95	99.95

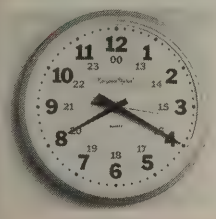
CLOCKS FOR THE HAMSHACK



BMI

▶**972A** (left) Battery operated 12-hour time quartz controlled clock with 12" dial and sweep second hand. Black textured case and clear glass crystal. Uses 1 (size AA) battery. 14" dia. x 13¼" d. Looks good in shack! **$37.95**

▶**973A** (right) 24-hour version **$49.95**

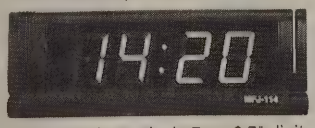


▶**Model 972AD**
14" diameter
12/24 hour format
wall clock **$39.95**

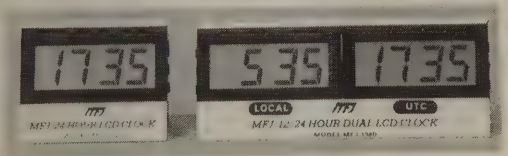
MFJ

▶**105B 24** Hour Quartz Wall Clock
Handsome black, 10" diameter face, sweep second hand. Uses single "A" battery, not included **$19.95**

▶**112** Dx'ers World Map Clock and Calendar Latest electronic and display technology shows a World Map with 25 major world cities selectable by pushbutton. 12-hour time format with alarm feature. Large 1/2" LCD readout shows: Time, Month and Day in 24 different world time zones. Includes handy tilt bracket and long life lithium battery. 5¼"w x 3¼"h x ⅝"d **$24.95**



▶**114** Giant LED 24/12-hour clock. Four 2.3" digits. User selectable 12 or 24 -hour display format. 110VAC with battery back-up. 6½"h x 13"w x 1"d **$39.95**



▶**Small 24-hour Clocks** A Dual Clock with separate UTC and local time displays, and a Single Clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.

▶**107B** Single Clock, 2¼"w x 1"h x 2"d ..... **$ 9.95**

▶**108B** Dual Clock, 4¾"w x 1"h x 2"d **19.95**

NAVAL

▶**HTS-3** Audio Booster Speaker
Improves audio output from HT's, Walkman, and others. Has 10dB audio amplifier and quality 3½" speaker. Requires (4) AA batteries; alkaline or nicads, or 5-15VDC. Has built-in charger. Comes with 5 ft. audio cord with plug and stereo to monaural converter. 2¼"w x 4½"h x 2½"d, 1 lb **$34.95**

ASTRON Power Supplies

The alternative to more costly "matching" power supplies

▶**Features:** 105–125V AC input, 13.8V DC output; internally adjustable from 11–15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavy-duty heat sink • 3-wire cord • 1-year warranty • Made in U.S.A. Separate voltage and ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage and ampere meters, plus voltage adjustment (2–15V DC) on VS-20M, VS-35M and VS-50M. Models RM-35M, RM-50M and RM-60M are rack mount.

Astron Model	Cont. Amps	ICS Amps	Size (in.) h w d	Ship. wt.	Regular Price	AES Price
RS-7A	5	7	3¾ x 6½ x 9	9	$68.95	$59.95
RS-10A	7½	10	4 x 7½ x 10¾	11	85.95	69.95
RS-12A	9	12	4½ x 8 x 10¾	13	99.95	79.95
RS-20A	16	20	5 x 9 x 10½	18	121.95	99.95
RS-35A	25	35	5 x 11 x 11	27	197.95	149.95
RS-50A	37	50	6 x 13¾ x 11	46	285.95	219.95
RS-70A	57	70	6 x 13¾ x 12	48	339.95	259.95
with separate volt/amp meters						
RS-20M	16	20	5 x 9 x 10½	18	144.95	119.95
RS-35M	25	35	5 x 11 x 11	27	204.95	169.95
RS-50M	37	50	6 x 13¾ x 11	46	314.95	239.95
RS-70M	57	70	6 x 13¾ x 12	48	372.95	289.95
with variable output & separate volt/amp meters						
VS-20ML	16	20	5 x 9 x 10½	20	170.95	139.95
VS-35M	25	35	5 x 11 x 11	29	238.95	189.95
VS-50M	37	50	6 x 13¾ x 11	46	330.95	259.95
Rack mount models – separate volt/amp meters						
RM-35M	25	35	5¼ x 19 x 12	38	318.95	249.95
RM-50M	37	50	5¼ x 19 x 12	50	354.95	279.95
RM-60M	50	55	7 x 19 x 12	60	467.95	359.95

▶**ASTRON RS-4L** Power supply with built-in cigarette lighter receptacle on the front panel. 13V DC @ 4 Amps peak, 3 Amps continuous. 3½"h x 6½"w x 4¼"d, 6 lbs..... **$49.95**

▶**ASTRON RS-12S** Power supply with built-in speaker. Rated 13VDC @ 12A pk., 9A cont. 4½"h x 8"w x 9"d, 13 lbs..... **$89.95**

ASTRON Solid-state Power Inverters

General Purpose

▶**12/115** Converts 12V DC to 115VAC @ 60 Hz. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers your ham rig, small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W, overload protected. Produces a square wave output which is not recommended for devices where high transients are not tolerable. 4½"h x 8"w x 9"d, 9 lbs. **$59.95**

Aircraft

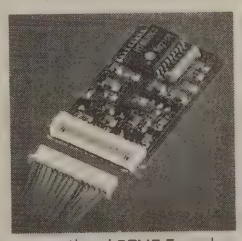
▶**2412** Converts 22 to 32V DC input to 13.8V DC output @ 9 amps. Eliminates tapping into 28V battery for 12V **$59.95**

▶**2412-20** Same as above, but rated 16 amps output.. **$79.95**

NORCOMM

Sub-miniature Touch-Tone® Decoder

▶**NC-401** Designed for selective signaling in many applications. Combines two distinct, separately addressable DTMF Decoders in one unit for multiple user-configurable output functions. Decodes all 16 standard DTMF characters with an address length of 1–14 characters and features E²Prom memory for non-volatile storage of programmed codes, input and output functions, remote programming, deadbeat disable and user outputs. Programs by means of a conventional DTMF Encoder. Comes with 12" leads/plug. 0.80"w x 1.37"l x 0.23"h..... **$59.95**

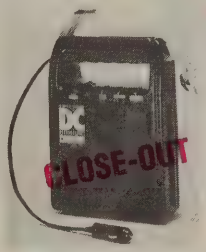


Order Toll Free & use your Credit Card for Same Day Shipping

INNOVA ELECTRONICS CORPORATION

Power source for 12V DC Accessories

Portable Power for anything with a male cigarette lighter plug – HAM transceivers, cellular phones, spotlights, inverters, etc …



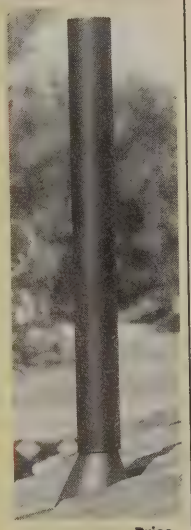
▶**06-1101** DC POWERPACK Contains an internal maintenance-free, sealed lead-acid rechargeable battery rated 12VDC @ 6.5 Amp/Hour, fused at 10 amp. Recharging time from a vehicle with engine running is 1 to 3 hours, or from optional AC/DC adapter, 8 to 10 hours. 7¼ "w x 3¼ "d x 10"h, 6.8 lbs **$49.95**

▶**06-9509** AC/DC adapter **$9.95**

▶**06-1130** DC POWERPACK
Like, but smaller than the 06-1130. The internal maintenance-free sealed lead-acid battery is rated 12VDC @ 3 Amp/Hour, fused at 10 amp. Recharging time from running vehicle is 2 to 4 hours, or from included AC/DC adapter, 4 to 6 hours. 3"w x 3"d x 7½"h, 3 lbs....**$49.95**

Forbes Group

Ventenna™



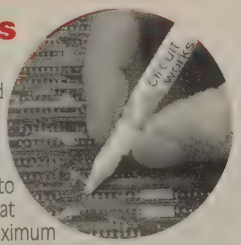
Stealth! Get around those antenna restrictions and finicky neighbors. The **Ventenna** is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1" to 2½" plumbing vent pipe, connect up your coax and you're on the air.

Ready to go! – No Tuning or Measuring is required.
Choose from single band models for 2M, 220MHz or 440MHz and a 2M/440MHz Dual Bander.

Model	Description	Price
▶**VT-14**	2 meters, 3 ft. tall, 2.6dB gain	$44.95
▶**VT-22**	220MHz, 25" tall, 2.6dB gain	$44.95
▶**VT-27**	2m/440MHz Dual bander	$66.95
▶**VT-44**	440MHz, 14" tall, 2.6dB gain	$44.95
▶**VT-15S**	Scanner Model 3 ft. tall, 2.6dB gain	$44.95
▶**VT-SWL**	SWL Model 3 ft. tall, 20dB gain....CLOSE-OUT	89.95

Circuit Works

Conductive Pen

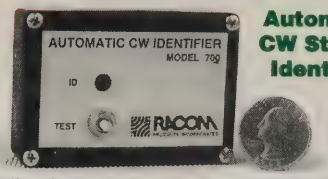


Features a specially a formulated silver thermoplastic designed to link circuit board components, repair traces, make jumpers and shield delicate electronics. Easy to apply, air drys in 3 to 5 minutes at room temperature, achieves maximum conductivity after 20 minutes. Can be heat cured in 1 to 2 minutes at 250 to 300°F. May be soldered at 350°F for <5 seconds after heat cure by using a low temperature tin, lead or silver solder with flux for best results. Traces 1/32" and wider – contains enough material for 100 ft..... **$11.95**

TOP TRADES ✆ CALL!

We take Clean, Late Model SSB & FM Gear in trade towards New Equipment shown in this Catalog.

RACOM PRODUCTS INCORPORATED



Automatic CW Station Identifier

Applications in: Ham Radio • Business Radio (mobiles or base station) • Public Safety or local government • Local or remote controlled stations and repeaters • Paging operations • Marine

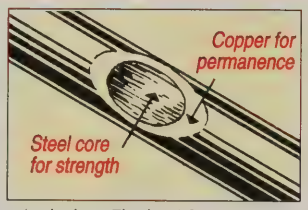
▶Model 700 Automatically, reliably identifies your radio transmitter call sign at CW speeds programmable from 10 to 40 wpm. Removable and re-programmable EEPROM – program call signs (up to 50 characters) by a cable to a PC, or at the factory. Four programmable operating modes comply with all FCC regulations concerning identification. Standard pulsed tone ID or toneless CW for pulsed carrier ID. Includes programmable (0-98 minutes) interval timer, monitor delay, code speed and tone frequency. Two activity monitors and two timers inhibit identification when station is in use. Requires 9–16 V @ 100 mA. 2¾"w x 2" h x 1¼"d, 3 oz.....**$92.00**

▶700-PC PC Programming cable and software for changing Call Letters and Parameters.....**$30.00**

CROWN METAL

COPPERWELD® Antenna Wire

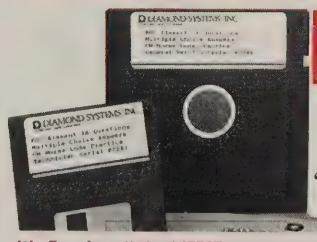
FORGE-WELDED makes the two metals inseparable!



Solid bare copper-over-steel wire – The best for antennas! Very strong, steel core has very little stretch and long service life. Copper covering provides low RF resistance, easy to solder. Choice of 12, 14 or 18 gauge, 100, 150, 250, 500 or 1000 ft. rolls.

AN-122	100 ft. #12	$ 24.95	AN-143 150 ft. #14	$ 24.95
AN-123	150 ft. #12	29.95	AN-144 250 ft. #14	29.95
AN-124	250 ft. #12	49.95	AN-146 500 ft. #14	54.95
AN-126	500 ft. #12	79.95	AN-148 1000 ft. #14	89.95
AN-128	1000 ft. #12	129.95	AN-181 250 ft. #18	14.95
AN-142	100 ft. #14	19.95	AN-182 500 ft. #18	24.95

▶The ART of Electronics A single authoritative text and reference on electronic analog and digital circuit design. Emphasizes methods actually used by circuit designers–a combination of some basis laws, rules of thumb, and a large bag of tricks. The largely non-mathematical treatment encourages circuit intuition, brain storming, & simplified calculations of circuit values and performance. 7" x 10"– 1120 pages.....**$59.95**



DIAMOND Systems

Amateur Radio License Study Courses for IBM PC/XT/AT and "look-alikes" using PC/MS DOS

It's Easy! **. . all the LATEST study material needed for the FCC Exam • Theory, Code, and Regulations – included.**

Prep material for Amateur Licenses Novice through Extra class and No-Code Technician! Software includes complete FCC VEC questions, all sub elements, generates 1000's of practice tests, keeps score, plus a code teaching program.

DS-IBM-N	Novice class	$39.95	DS-IBM-G General class	$34.95
DS-IBM-T	Technician class	34.95	DS-IBM-A Advanced class	49.95
DS-IBM-NC	No Code Tech	49.95	DS-IBM-E Extra class	49.95

GROTHE Sirens & Horns

▶VS-2 Emergency Vehicle Siren Designed for the Volunteer Fireman, a quality built wail-yelp alarm that delivers big sound performance – a whopping 120Dba sound level at 4 ft. Frequency range, 600 to 1200Hz. Pre-wired with a 3-pos. switch (Yelp-Off-Wail), high efficiency waterproof horn speaker, 10 ft. cable, mounting bracket/hardware. 12VDC @ 1.5A, 2.7 lbs.....**$89.95**

▶VS-3 Vehicle P/A & AirHorn with Rebroadcast Powerful airhorn sound with four different sounds really calls attention to your vehicle. No siren. Delivers 95 watts output – 120 Dba at 4 ft. Rebroadcast feature allows sound from mobile rig, scanner or radio to be rebroadcast and monitored through the speaker outside. Includes horn speaker, microphone, electronic center, 10 ft. cable, mounting bracket and hardware. 12 VDC @ 1.5A.....**$129.95**

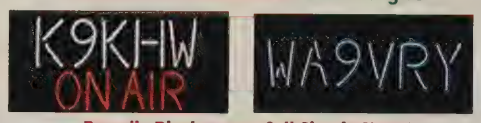
▶VS-4 P/A Emergency Vehicle Siren Contains P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn and P/A Override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes horn speaker , microphone, electronic center (3" x 3½" x 2"), 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5A.....**$139.95**

Siren–Light Combo Consists of a quality built siren/yelp alarm, revolving halogen or strobe light and rubberized window mount in one unit. Requires no installation and fits all cars. Just slide on top of the car window and plug into cigarette lighter outlet. The power plug contains an "on" LED and three position switch to select yelp, off or wail modes. 12 VDC @ 5 amps.

Halogen specify amber, blue or red .....**▶VS-2L** **$249.00**

Strobe specify amber, blue or red .....**▶VS-2LS** **$299.00**

ALPHA NEONX Neon Signs



Proudly Display your Call Sign in Neon!

Manufactured exclusively for **AES®**, these blazing Neon Displays are sensational! Compact, solid state high voltage supply. All connections are sealed for protection and automatic shut off in case of breakage, open or short circuit.

▶Two-line model (left) Displays CALL SIGN and ON-AIR. Instead of ON-AIR you may substitute a name, or anything else up to nine characters Choice of Red, Blue, Gold or White neon colors for each line. Mounted on an attractive smoke-black 18"w x 12"h x 2¾"d acrylic panel with chain **$249.95**

▶Single-line model (right) Smoke black acrylic panel.measures 18"w x 12"h x 2¾"d. Display your choice of CALL SIGN, NAME, or anything else, up to nine characters, in brilliant Red, Blue, Gold or White neon colors. **$199.95**

Special Order – Allow two-weeks for delivery

Due to the speciality nature of this item, all sales are final with no returns. Orders must be accompanied by a check or money order. No credit cards or COD orders accepted.

▶COYNE MacHam™ Upgrade your Amateur Radio License on your Apple Macintosh. 3½" disks contain all FCC test questions and diagrams with scoring on screen or printed. Prints complete FCC-style exams. Requires 2Mb RAM, Hard disk, System 6.05, .07 or 7.0 and Hypercard 2.x. When ordering, specify for:

General, Advanced or **Extra** class each.....**$34.95**

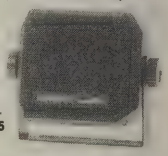
NO CODE TECH.....**$39.95**

KENWOOD Accessories

▶HS-5 High quality Headphones specifically designed for use with communications systems. They provide a natural sound and eliminate any uncomfortable pressure feeling, permitting long hours of fatigue-free listening. Nominal impedance is 8Ω, frequency response is 150Hz to 4kHz.A 78" cord with a 1/4" phone plug. 12 oz.....**$79.95**

▶PC-1A Phone Patch Controller Interfaces transceiver with telephone line. Isolates receiver and transmitter to provide phone patching capability. Comes with an 8-pin plug wired for KENWOOD transceivers but may be used with most other equipment by simply changing connections. Features NULL control, receiver and transmitter gain controls and VU level meter. 5¾"w x 2¼"h x 5"d, 1¾ lbs.....**$129.95**

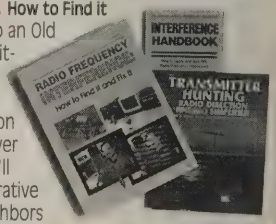
▶LF-30A HF Low Pass Filter Reduces the possibility of television and broadcast interference by suppressing harmonics contained in RF signals from 1.9 to 28MHz transmitters. The cut-off frequency is 30MHz, and the attenuation is greater than 90dB from 90 to 300MHz. SO-239 connectors (52Ω), rated at 1000W PEP (SSB). 9½" x 2" x 1⁹⁄₁₆", 1.2 lbs.....**$64.95**



▶SP-41 Compact Mobile Speaker Contains a 5W rated 2¼" speaker with a 4Ω, nominal impedance and 600Hz to 4 kHz frequency response. Includes a 75" cord with 3.5mm plug and mounting bracket. 3⅞"w x 3"h x 2⅛"d, ½ lb.....**$49.95**

▶SP-50B Quality Mobile Speaker Contains a 2.5W rated 3" speaker with an 8Ω impedance and 300Hz to 4 kHz frequency response. Includes a 102" cord with 3.5mm plug and mounting bracket. 5"w x 3⁹⁄₃₂"h x 1⁷⁄₁₆"d, 0.6 lbs.....**$55.95**

▶1996 ARRL HANDBOOK A top-to-bottom rewrite and now includes useful ham radio SOFTWARE on a 3½", 1.44Mb IBM compatible diskette. This book is the guide to radio theory that every ham should know, including the latest digital modes and hundreds of explanatory and practical circuits. A gold mine of construction projects that will allow all hams, beginners, old-timers and everyone in between to build amateur gear for their stations. A reference guide with updated parts lists and equipment suppliers and solid-state component data, transmitting tubes **ARR100 $38.00**



▶RADIO INTERFERENCE How to Find it and Fix It A new approach to an Old Amateur Radio problem. Written by RFI experts, it's filled with proven ways to solve common and not so common RFI or EMI problems, whatever their cause. In addition, you'll learn how to build a co-operative environment with your neighbors and how to contact volunteers who can assist you with those tricky situations .....**ARR 260 $15.00**

▶TRANSMITTER HUNTING Radio Direction Finding Information about equipment and techniques for HF and VHF radio direction finding. Transmitter hunting is both practical and fun. Using the information in this book you can also locate jammers and other sources of radio signals and malicious interference that is causing problems.. **ARR 320 $19.00**

More ARRL Books! — See the Price List

▶INTERFERENCE HANDBOOK Locate and resolve all types of interference problems. Describes interference sources and the methods used to locate them. Discusses suppression circuits for interfering devices and protection techniques for home entertainment equipment ..... **RAC 087093 $13.95**

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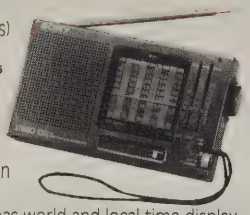
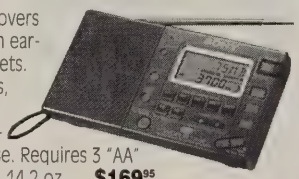
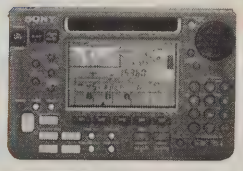


▶ICF-SW10 Compact and convenient, easy to use. 12 bands–covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6"w x 3½"h x 1¼"d, 12 oz.... **$49.95**

▶ICF-SW30 12 bands. Covers AM, FM (stereo w/headphones) and 10 shortwave bands. Auto Scan Tuning in 1 KHz steps, 15 memory presets. Clock has world and local time display, alarm and sleep timers. Requires three "AA" batteries or external 4.5V DC. 4⅜"h x 6¾"w x 1 7/16"d **$99.95**



▶ICF-SW33 WORLD BAND RADIO 13 bands, covers 0.5–26.1MHz AM and 87.6–108MHz FM stereo (with earphones). Scan tuning and 17 station memory presets. World time clock displays 38 city names and times, and has five time presets, sleep timer and auto shut-off. News/Music tone control, battery indicator. Supplied with telescopic antenna, carrying case. Requires 3 "AA" batteries or external 4.5V DC. 6⅝"w x 3¾"h x 1¼"d, 14.2 oz **$169.95**



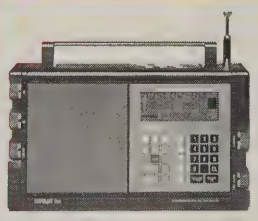
ICF-SW55 WORLD BAND RECEIVER Similar to ICF-7600, but improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires four "AA" batteries or external 6VAC, AC adapter included.4¾"h x 7⅝"w x 1 5/16"d, 1½ lbs **$349.95**

Front view

Rear view

***▶New!* ICF-SW1000T WORLD BAND RECEIVER** Features a full-featured Stereo Cassette Recorder/Player built in to the back .Provides 1 kHz step tuning LW/MW/SW/FM/SSB reception with synchronous detection via 10 key direct access.and 32 memory presets. FM stereo reception via headphones. Built-in clock with alarm and sleep timer Timer Rec/Play feature allows convenient time shift recording. Stereo microphone and headphones, active antenna and carrying case supplied **$599.95**

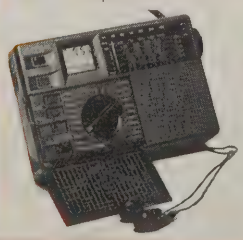
GRUNDIG



▶SATELLIT 700 Covers 1.6-30MHz. AM, FM and LW bands with 512 memories. FM stereo with headphones or external speakers (not included). Direct frequency entry via backlit keypad, SSB & synchronous detectors, wide/narrow filters. Dual clocks and turn-on and sleep timers, 8 character memory bank labeling with 2,048 memories possible. LCD multi-function display, Built-in telescoping, ferrite antenna and ext. antenna connector, Operates from 110/220V AC, 4 "D" alkaline or nicads. Built-in charger.12"w x 7"h x 2¾"d, 4 lbs .**$449.95**

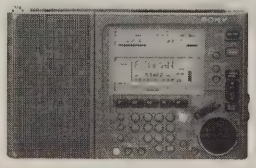
▶YACHT BOY 400 Covers 1.6–30MHz, all shortwave bands plus FM-stereo (with earphones), AM and long wave. Direct keypad frequency entry or scan tuning with 40 memory presets. SSB reception with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function backlit LCD display shows dual zone 24 hour time, frequency, band and signal strength. Dual bandwidth selectivity. Automatic turn-on and sleep timer. Includes stereo earphones, external reel-up antenna for SW, and carrying pouch. Requires 6 "AA" batteries or external 9V DC. 4½"h x 7¾"w x 1⅜"d, 1½ lb **$199.95**

▶YACHT BOY 305 Continuous SW coverage from 2.30 to 21.85MHz without gaps. Includes all existing SW bands plus FM-stereo, and medium wave 30 memory presets. Direct entry digital tuning, auto-scan and up or down slewing. Large cavity speaker enclosure for true rich sound. Requires 2 C-cell batteries. or external 110V AC adapter. 4"h x 7½"w x 1½"d, <1 lb..... **$129.95**



▶TRAVELLER II 7 bands, covers AM/FM broadcast the 19, 25, 31, 41, 49M shortwave bands and 5.8-15.6MHz. Multi-function LCD display, pushbutton and slide controls, tuning indicator. World time selection switch - select a city and read the time! Clock with travel alarm. Requires 3 size "AA" batteries (not included). Telescoping and built-in ferrite antenna. 2" speaker, jacks for earphones and external. AC adapter (not included). 5½"w x 3½"h x 1¼"d **$99.95**

▶ICF-2010 Covers 150KHz-30MHz, 76-108MHz and 116-136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scan, memory scan or 32 memory presets. LCD display, switchable IF bandwidth, fine tune. 12/24-hour clock with alarm, programmable timer, and sleep timer. Telescoping and built-in ferrite bar antennas, 4" speaker. Record, earphone, external antenna and DC jacks. Operates from 3 "D" and 2 "AA" batteries, 12V DC, or 110V AC adapter. 6½"h x 11⅜"w x 2⅛"d, 3¾ lbs..... **$359.95**

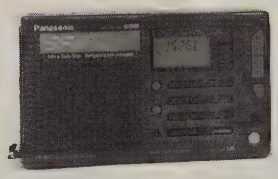


▶ICF-SW77 Same coverage (except air band) and features as ICF-2010. Stores up to 100 stations (162 frequencies), allows stations to be selected by name and is capable of storing broadcast schedules. Programmable 6 character Station Name Display, 50 Hz tuning resolution, FM stereo with headphones, bass/treble controls. 10⅞ "w x 6⅞"h x 1 ⅞ "d, 3¼ lb ...**$449.95**

▶ICF-SW100S The size of a pocket calculator, but loaded with features. Covers 150kHz-30MHz and 76-108 MHz FM band; stereo with earphones and SSB reception, 100 Hz tuning. steps, 50 memory presets, 24 hour clock/timer, world time computer, station names display, illuminated LCD. AC adapter, stereo earphones, active antenna, soft carrying case, station directory and manual included. 4⅜"h x 2⅞"w x 1 1/16"d **$349.95**

▶ICF-SW7600G WORLD BAND RECEIVER Covers 150kHz–30MHz and 76–108MHz FM (stereo with earphones). Synchronous AM detection, SSB and FM stereo (headphones). 10-key Direct Access Tuning™ and 20 station presets, LCD display. Tone control, external antenna and record jacks, clock/timer with sleep and standby functions, tilt bracket. Includes compact reel antenna, and carrying case. Requires 4 "AA" batteries. 4½"h x 7½"w x 1¼ "d, 1½ lbs . **$199.95**

PANASONIC



▶RF-B45 PORTABLE RECEIVER Covers (SW) 1.62–29.99MHz; (MW) 520–1610KHz; (FM) 87.5–108MHz; (LW) 144–288kHz. Capable.of SSB reception. 6-Way multi-tuning system has 18-station preset memory, frequency direct access, meter band access, up/down manual tuning, memory search with signal strength and auto tuning. LCD display, quartz clock with sleep timer, high/low tone selector, DX/Local selector. Deluxe carrying case, ext. antenna wire for shortwave reception, hand strap and earphone included. Requires 4 "AA" batteries (not included). 4¾"h x 8½"w x 1"d, 1.6 lbs..... **$169.95**

YAESU

▶FRG-100B HIGH PERFORMANCE COMMUNICATIONS RECEIVER

Covers 50KHz to 30MHz with CW, SSB, AM and optional FM modes. 50 fully-tunable memory channels store frequency, mode and filter selection; 2 additional memories provide band edge information used in scanning function. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enables convenient searching for new stations, or scanning within a known band. Twin 12 and 24 hour programmable clocks with on/off-timer and sleep-timer. Yaesu CAT system for PC control. 9.3"w x 3.6"h x 9.5"d, 6.6 lbs. . **CALL**

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SP-200A SOUND ENHANCER

Improves reception on any receiver, scanner or transceiver

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Six products in one! **Top Quality Speaker • Adjustable Filter • Recorder Activator • Audio Amplifier • Audio Activated Squelch • Noise Limiter**

Peak desired signals while reducing or even eliminating interference. Ideal for voice, music, CW or data. Stereo/mono headphone jack for privacy.

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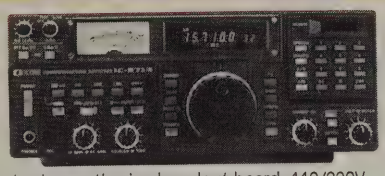
Selectivity: Peak/notch 30dB or greater, 0.3-6 kHz
Squelch Hold: 0-10 seconds
Noise Limiter: Adjustable-threshold pulse noise clamp
Tape Activator: Audio activated (VOX), 3 second hold
Tape Output: 500 mV P-P @ 600Ω (nom.
Headphone Jack: Universal mono-wired stereo jack
Dimensions: 10⅞"w x 6¾"h x 7¼"d
Power: 12-14 VDC @ 500 ma; ,120 VAC adapter incl.

Shortwave Radios & Communication Receivers

ICOM



ICOM R-71A HF RECEIVER Covers 100kHz to 30MHz, all modes (FM is optional). Dual VFOs and direct keyboard entry, thirty-two tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional wireless remote controller and voice synthesized readout board. 110/220V AC operation. Optional kit for 12V DC operation.11⅞"w x 4⅞"h x 10⅞"d, 16½ lbs. .... **CALL**

ICOM R-7100-12 VHF/UHF SCANNING RECEIVER Frequency overage from 25 to 800 and 900-2000MHz. Dial and keyboard entry, 900 numbered memory channels. Multiple scanning capabilities with new window scan, all-mode squelch. Clock with timer, optional TV receive capability. **CALL**

ICOM R-100-11 BASE OR MOBILE RECEIVER Covers 500kHz–1800MHz (800–900MHz blocked); with FM, wide FM and AM modes. Keyboard and manual tuning, selectable steps,7 scanning. modes. 121 memories: 100 for frequency, mode, attenuator and preamplifier settings; 20 scan edge for 10 pairs of ranges for programmed scan and 1 priority. Three antenna inputs., 24-hour clock/timer. Telescoping ant., DC cord and mobile mount included. 13.8VDC @ 1A ..... **CALL**

ICOM R-1-15 GENERAL COVERAGE POCKET SCANNING RECEIVER Less than 2" wide! – fits in your shirt pocket.Covers 100kHz to 800MHz and 900-1300MHz with FM/wide-FM and AM modes.100 memory channels. Programmed, memory, selected mode memory, and auto memory write scanning. Rotary tuning or direct keyboard entry, LCD display, 24-hour clock with timer, adjustable LCD contrast, signal indicator. Power-saver function, built-in nicad batteries; or use optional batteries or 6 to 16VDC from external. source. AC wall charger/adapter and belt clip included. 1⅞"w x 4"h x 1½"d . **CALL**

DRAKE

DRAKE R-8A COMMUNICATIONS RECEIVER Covers 100kHz–30MHz + 33–55, and 108–174MHz with opt. VHF converter. Alphanumeric display, dual VFOs; 440 memories; multiple-function scanning; AM, FM , RTTY, CW, SSB modes; 4 voice bandwidth filters; switchable preamplifier and attenuator; dual noise blanker; IF shift and notch. S-meter; fluorescent display; dual time zone clock; dual timers, dual antenna connectors. Single button access to mode and bandwidth selection. RS-232 control capable. Optional interface software for MS-DOS computers and external speaker. Universal power supply. 13½"w x 5¼"h x 13"d, 13 lbs **$1079.00**

DRAKE SW-8 COMMUNICATIONS RECEIVER Covers 500kHz to 30MHz, 87 to 108MHz FM broadcast (stereo at headphone jack), and the 116 to 136MHz aircraft band. Standard and synchronous detection AM, and SSB reception on medium and shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual 6 or 4 kHz selectivity on AM, 2.3kHz selectivity on SSB. High contrast LCD readout provides 100Hz tuning accuracy. Dual-mode clock timer and 70 scannable memories. AC adapter supplied or use optional internal batteries. 11"w x 5¼"h x 11¾ "d, 10 lbs.. **$699.00**

KENWOOD

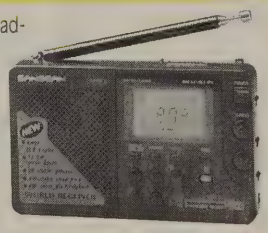
R-5000 COMMUNICATIONS RECEIVER Covers 100 KHz–30MHz; 108–174MHz; optional VHF converter. SSB/CW/AM/FM modes. Dual VFO & keyboard frequency control, 100 multi-function memories. 6kHz and 2.5kHz SSB filters; accepts two more for CW, SSB or AM. Selectable AGC, variable attenuator, noise blanker, notch filter, IF shift. Dual 24-hour clocks and timer. Mute, record and headphone jacks. Optional VHF, external speaker, earphones, filters, voice synthesizer, computer control. 117V AC (13.8V DC kit is optional) ..... **CALL**

MFJ

MFJ-8100K & 8100W SHORTWAVE REGENERATIVE RECEIVER RF stage to really pick s up weak signals and it goes into regeneration smoothly without pops or dead spots. Stations all over the world come in loud and clear with just a 10 ft. wire. Listen to international SW broadcasts, hams on SSB and CW, WWV, RTTY, packet and more. Covers all or part of 75/80/49/40/30/20/25/22/19/17/16/15/13 meter bands in 5 bands. Smooth vernier reduction drive, bandswitch, volume and RF gain controls. Rugged aluminum cabinet. Uses a 9V battery or ext.DC. Two earphone jacks for Walkman-type earphones or plug-in speakers. 7"w x 2½"h x 6"d, 1 lb. **MFJ-8100K (kit) $59.95 • MFJ-8100W (wired) $72.95**

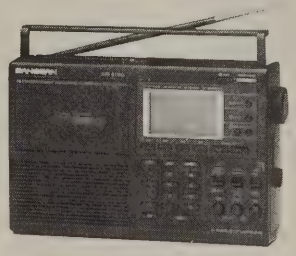
MFJ-8400K & 8400W 2 METER REPEATER MONITOR RECEIVER Ideal second receiver, perfect for monitoring packet. Low noise, high-gain RF preamp gives 0.2 mV sensitivity. Dual-conversion superhet with sharp ceramic filters and crystal controlled 2nd oscillator. Antenna input and 19" whip. Vernier reduction drive, tune, squelch and volume controls, built-in speaker. MFJ's exclusive Tail-Free™ squelch eliminates squelch tails. Uses 9V battery, ext. 9-12V DC or 110V AC with opt. MFJ 1312B. 5"w x 2½"h x 4"d, 1 lb. **MFJ-8400K (kit) $72.95 • MFJ-8400W (wired) $89.95**

SANGEAN



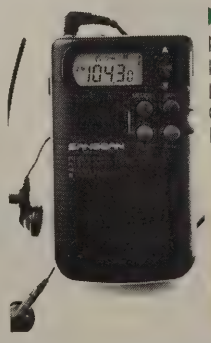
ATS-202 15 bands, covers AM, FM-stereo (with headphones), 2.3 to 7.3 and 9.5 to 26.10MHz. MW 9k/10k switch. Manual and automatic station search, 20 station memory presets. Large backlit LCD display, clock with alarm and sleep timer features. Low battery indication. Requires two "AA" batteries or external 3V DC. 5¼"w x 3⅛"h x 1⅛ "d, 8.7 oz **$89.95**

ATS-303 13 bands, covers AM, FM-stereo (with headphones), 2.3 to 7.3 and 9.5 to 26.10MHz. MW 9k/10k switch. Selectable continuous tuning across frequency range and/or SW band. Time/frequency display, Auto/manual station search, 20 station memory presets. Large LCD display, tuning LED. Clock with alarm by radio or buzzer, adjustable sleep timer. Low battery icon. Requires 4 "AA" batteries or external 6V DC. 6½"w x 4⅜"h x 1⅜ "d,15 oz **$79.95**



ATS-818CS World Band Receiver with Programmable Cassette Recorder 16 bands, continuous coverage 50kHz–30MHz. AM/SSB/CW/FM-(stereo via headphones). 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary Dial. AM wide/narrow filter, tone/RF gain controls, signal strength/battery indicator. Programmable cassette recorder, play/record LED indicator, auto-stop feature. Clock with dual time display, alarm and sleep timer. Requires 7 "AA" batteries. Includes AC adapter, ext. antenna adapter. 11½"w x 7¾"h x 2¾"d, 5 lbs **$229.95**

ATS-818 World Band Receiver All of the features as the ATS-818CS above, but without the built-in cassette recorder **$179.95**



DT-200V Broadcast & TV Band Receiver Fits in shirt pocket or clips to belt. Covers AM/FM (FM stereo via headphone) plus the audio portion of TV channels 2–13. LCD display, up/down tuning, auto-scan, 19 memories, auto shut-off. Built-in speaker. Belt clip, stereo earphones included. Requires 2 "AA" batteries. 4⅜" x 2⅝" x ¾", 5 oz. **$69.95**

Jeff, N9EDQ
AES®
"Shortwave Expert"
1-800-558-0411

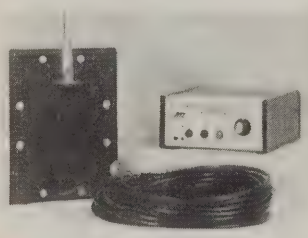
Shortwave Accessories...

▶MFJ-784B Super DSP Filter Digital Signal Processing automatically eliminates hetrodynes, reduces noise and interference on SSB/CW/AM, all digital modes, VHF, EME and satellite. Tunable FIR linear phase filters minimize ringing, prevent data errors, and have up to 60dB attenuation, just 75Hz away. Tunable Spotting Tone™ automatically tunes the CW filter even in the narrowest bandwidth. MFJ's exclusive Adaptive Tuning™ center frequency tuning automatically becomes finer as you narrow the bandwidth making extremely narrow filters easy-to-use. Improved automatic notch with variable aggressiveness. Speaker On/Off button, Filter Talk™ and more! 2W audio amplifier/AGC. 12V DC or 110VAC with MFJ-1315. 2½"h x 9"w x 6"d **$219.95**

▶MFJ-752C SSB/CW Audio Filter (left) Pull out stations from noise and interference. Peak, notch, low or high pass signals to eliminate hetrodynes and interference. Filters tune 300–3000Hz, bandwidth varies from 40 Hz to almost flat, notches to 70dB. Noise limiter. Switchable inputs for 2 radios. 9-18VDC or 110VAC with MFJ-1312. 10"w x 2"h x 6"d..... **$94.95**

▶MFJ-956 LW/MW/SW Preselector/Tuner (right) Improves the reception of signals from 150kHz–30MHz. Tuning boosts signals while rejecting images, intermodulation, and other phantom signals. SO-239 connectors. 2"h x 3"w x 4"d **$39.95**

▶MFJ-959B Antenna Tuner & Preamplifier Covers 1.6 to 30MHz providing the proper impedance match between antenna and receiver for maximum signal and best reception. Built-in 20dB preamplifier with gain control and 20dB Attenuator. Front panel switches select from two antenna inputs and outputs for two receivers. 9-18VDC or 110VAC with MFJ-1312. 5"w x 2"h x 6"d..... **$99.95**



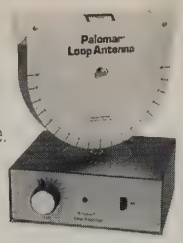
▶MFJ-1024 Outdoor Active Antenna Covers 50kHz–30MHz. Amplifier module with 54 inch whip mounts outside. Connection is made by 50 ft. of RG-58/U coax (supplied) to an control unit inside which contains a gain control and 20dB attenuator to prevent receiver overload from the amplified signals. Switches select between two receivers, and auxiliary antenna. LED "on" indicator. RCA phono auxiliary input and output jacks. 12VDC or 110VAC with MFJ-1312B adapter. Control: 6"w x 2"h x 5"d, Module: 3"h x 4"w x 4"d..... **$119.95**

▶MFJ-1020B Indoor Active Antenna Covers 300kHz to 30MHz in five bands. Built-in 21 inch telescoping antenna provides maximum signal strength. Also functions as a preselector when using an external antenna. Minimizes intermodulation, improves selectivity and reduces noise. Tune, Band, Gain, On-Off/Bypass controls. Uses 9V battery (not included), 9-18VDC or 110VAC with MFJ-1312 AC adapter. 5"w x 2"h x 6"d... **$79.95**

▶MFJ-462B Multi-Reader Copy RTTY, ASCII, CW and AMTOR signals from Amateur, Commercial, Military, Weather, Aero, Marine, Plugs into SW receiver phone jack, decodes and displays messages on a two-line, 16 character LCD display. 12VDC. 5½"w x 2½"h x 5½"d **$159.95**

Connect the MFJ-462B into an EPSON compatible computer and print CW, RTTY, AMTOR and ASCII messages Use the **MFJ-5413** standard RS-232 cable..... **$9.95**

▶PALOMAR LA-1 Loop Antenna Picks up less noise than other antennas. Frequency Range: VLF to 15MHz. Six plug-in loops for various frequency ranges rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamp compensates for small size. 2¼"h x 7¼"w h x 6"d . **$99.95**



▶Plug-in Loops for LA-1 Coverages: 40–150kHz, 150–550KHz, 550–1600kHz, 1.6–5MHz or 5–15MHz range ..... each **$89.95**

PALOMAR VLF Converters Receives and converts the 10 to 500kHz Very Low Frequency) band to 80 meters. Two models tune this low range on a general coverage receiver or ham band transceiver. Requires 9V battery. 2"h x 4¾"w" x 5"d.

▶VLF-A Ham Band only, use with a transceiver..... **$79.95**
▶VLF-S use with a General Coverage receiver **$79.95**

▶AMECO TPA Tunable Preamplifier/Active Antenna Covers 2–30 MHz in five bands. Use with an outside antenna as a tunable preamplifier with >20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Requires 9 VDC, or 110VAC with opt. PT-9T AC adapter. 2½ "h x 8"w x 6½"d..... **$69.95**

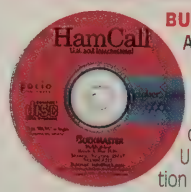
ANTENNA SUPERMARKET

▶EAVESDROPPER™ Shortwave Antenna An 8 trap configuration provides reception of all shortwave bands, 11 to 90M. Includes Zap-Trapper® gas-tube lightning arrestor and 50 ft. of support rope. Overall length is 42 ft., comes assembled. When ordering, specify with 100 ft. of 72Ω **twin lead**, or weatherproofed **SO-239** center connector for coaxial cable (not supplied).... **$79.95**

▶EAVESDROPPER™ SWL SLOPER Shortwave Antenna End-fed, coil loaded, with underslung parallel element. Mounts in a sloping configuration. Covers AM broadcast, 120 and 90M, and all shortwave bands 7 to 13M. Overall 67 ft., comes fully assembled. Includes Zap-Trapper® lightning arrestor, SO-239 connector, and 50 ft. of nylon rope..... **$79.95**

ALPHA DELTA

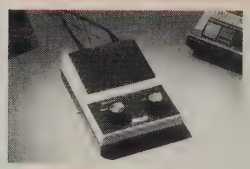
▶ SWL Sloper Antenna Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an appropriate antenna tuner, handles up to 2000 watts. Overall length is 60 ft, requires 50Ω coaxial cable ..... DX-SWL **$79.95**



BUCKMASTER HamCall CDROM for Apple Mac and IBM PC Compatibles Over 1,186,000 calls including over 392,000 international with call sign, name, address, license class, expiration date, and birth year data. Over 687,000 U.S. listings with class, birth year, expiration date, latitude/longitude, grid square, county, time zone, area code, elevation and station address. Clubs, military and RACES. Over 105,000 cross references from old to new calls. Over 800 PC public domain program and data files (over 400 ZIP files) .....BUC HAMCALL **$50.00**

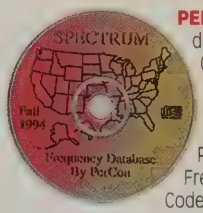
GROVE Antenna Factbook Improve reception by getting the best performance from your antenna system. This book provides the answers to dozens of questions about antennas. Written for hams, shortwave listeners and scanning enthusiasts. Meticulously researched, illustrated..... **BOK-104 $9.95**

▶AOR SDU5000 Spectrum Display Unit See stations above and below your receiving frequency. Usually the transmissions are short, but you can watch for stations to pop-up over a 10MHz window, then zero in. It's a menu-driven system for simple opertion, the display is a 3.1" HQM simple matrix color LCD and the resolution is 5 or 30KHz. Designed as a companion to the AOR AR-3000A but works with other receivers with a 10.7MHz output **$899.95**



▶BMI Nitelogger Automatic Recorder Activator Accepts audio output from any 8Ω audio source and provides 600Ω audio and voice activated relay operation for triggering a recorder. Three plug-in connections – one goes to the radios external speaker jack; the other two go into the remote and mic input jacks of a cassette recorder. For ham purposes this device can make a simple crossband repeater by connecting up two HT's. Built-in monitor speaker with volume, VOX sensitivity & delay controls. AC adapter supplied ..CLOSE-OUT **$69.95**

▶BMI RC-1A Impedance Matching Patch Cord Provides a proper impedance match between an 8Ω source and a 600Ω tape recorder input. Uses capacitive isolation of the audio signal. Provides proper loading for the source device, an attenuator prevents recorder input overload. 3.5mm plugs ... **$19.95**



PERCON SPECTRUM CD A frequency database with over 3 million records. Contains data for Police, Fire, Hospitals, Taxis, Businesses, State and Local Governments, Airlines, Hotels, Utilities, Theme Parks, Phone Companies, and more. Shows Frequency, Callsign, Radio Service Code, Class of Station, DBA Name, Transmitter Latitude and Longitude, City/County/State, and number of mobiles for Vehicle, Marine, Air, Portable and Pagers. Extract data by various sorts. Requires: 386 processor or above, CGA, EGA, or VGA Video Display, minimum of 2 Meg Hard Disk, CDROM Drive, and a printer for reports **$29.95**

WALNUT CREEK

▶QRZ! Ham Radio CDROM Volume 4 Winter 1995 edition

Contains the most up-to-date US FCC amateur radio license data with 700,000 names, addresses and callsigns. Contains an all-new shareware collection with 7031 data files covering all facets of amateur radio – over 600 Megabytes of information. New QRZ-II Windows search and retrieval software locates any callsign in less than 2 seconds. Search/display by callsign, name, city, street address, or zip code. Runs under Windows, NT, DOS, OS/2, Warp, UNIX, and Wabi All databases are in documented, open, and non-encrypted ASCII format. **WAL HAMQRZ $29.95**

QRZ! Ham Radio CD ROM also includes:

- 1000's of PC compatible Amateur Radio Programs
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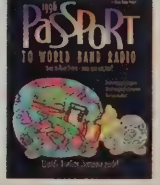
- Sound Blaster Compatible .WAV files for TNC Testing
- Windows Visual Basic and C++ Compatible .DLL Library
- Source code and executables for SunOS and AIX UNIX



Passport to World Band Radio Shortwave listening guide containing data on every international broadcast station; names, locations, frequencies, operating times, coverage, target area, transmit power, and more. Hourly guide for English language programs, worldwide. Test reports, buyer's guide . **ARR 251 $19.95**

THE GRUNDIG SATELLIT 700

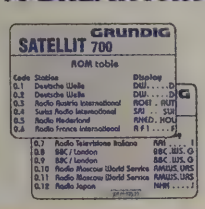
GRUNDIG

WORLD RECEIVER

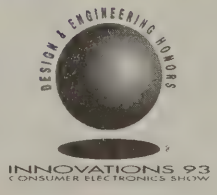
THE ULTIMATE IN DIGITAL TECHNOLOGY

SATELLIT 700 — the latest and most sophisticated portable world receiver available! Featuring phased lock looped synchronous digital circuitry for seamless AM, FM, LW, and SW reception from 1.6 – 30 Mhz. From London to Lithuania to San Francisco, tune in the world easily with its unique digital or manual tuning. With Grundig, the world is at your fingertips.

GERMAN ENGINEERING ANNOUNCES A BREAKTHROUGH IN MEMORY



The unprecedented 120 factory pre-programmed frequencies for worldwide reception makes tuning into the world's shortwave radio broadcast almost as simple as touching a button. You also have 512 alpha numeric user-programmable memory positions which can be expanded to 2048 memory positions so you can build your own favorite-station radio archive!



WORLD CLASS RECEPTION

With PLL Tuning, selectable wide/narrow band width filter, and a redesigned and vastly improved synchronous detector, the Satellit 700 offers unparalleled reception, sensitivity and selectivity. The 700 comes equipped with a built-in NiCad battery charger, the Grundig shortwave frequency guide, and a one-year warranty covering parts and labor. If you have any questions regarding the Satellit 700, please call our shortwave Hotline and talk to the experts, U.S. (800) 872-2228, and Canada (800) 637-1648 (9AM to 4PM PST).

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GRUNDIG

The Latest in Technology

Rated Best in Its Class.
Grundig's Yacht Boy 400 has received rave reviews from the shortwave press for combining a wealth of sophisticated features in one compact, portable package that doesn't cost a fortune. It incorporates features found on stationary shortwave systems that cost thousands, such as outstanding audio quality, precise 1 kHz increment tuning, up/down slewing, frequency scanning, signal strength indication, and single-sideband signal demodulation.

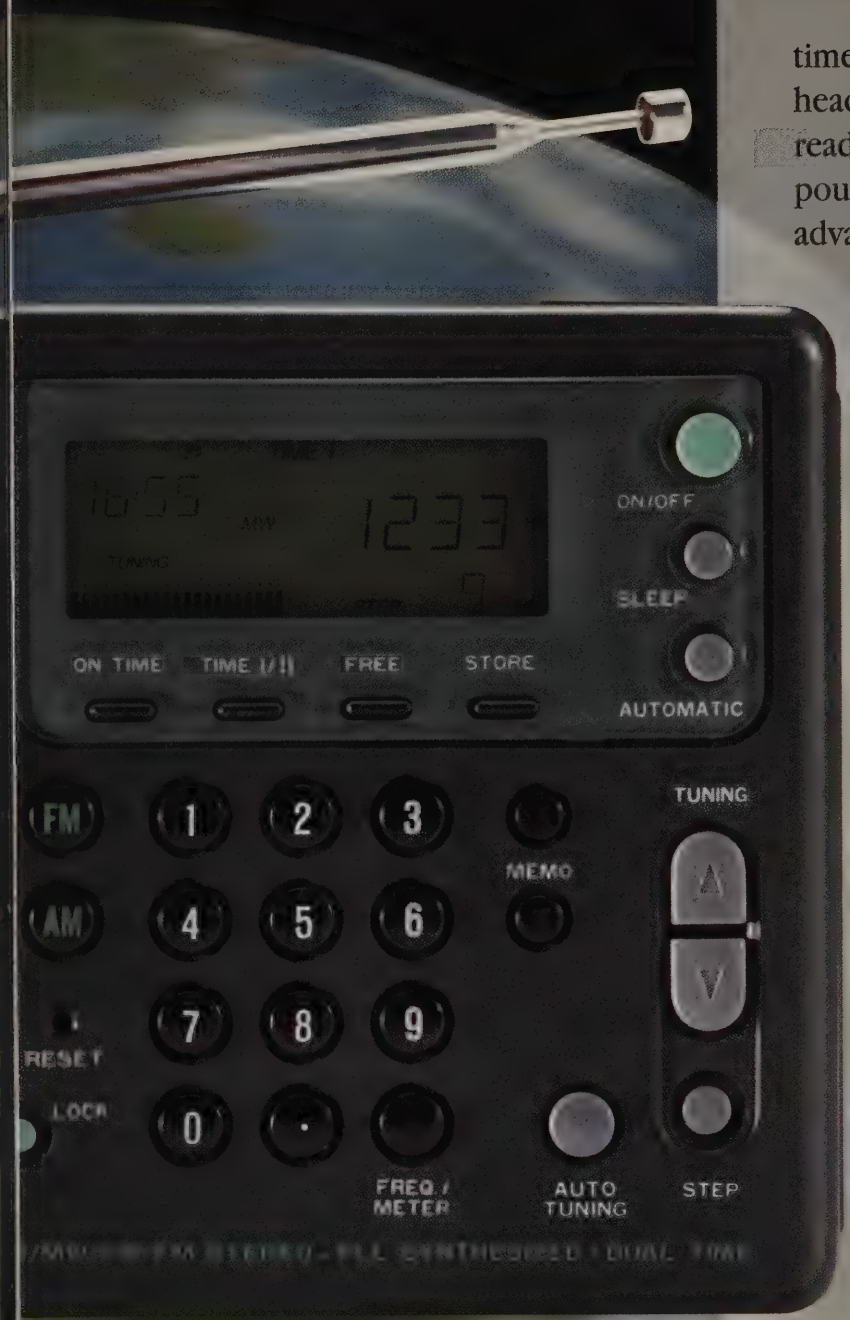
But the advantage mentioned most often in the YB-400 reviews was its ease of use for the novice listener. Following the included Grundig Shortwave Listening Guide, in moments you can be listening to foreign broadcasts beamed to North America.

Soon, you will be scanning the airwaves to tune in exotic music programs and sports events from faraway locales. The YB-400 even picks up shortwave amateur (ham radio) broadcasts and shortwave aviation/military frequencies (cockpit-to-tower communications). The possibilities for family fun, education, and enjoyment are boundless.

For travel or home use, Grundig adds a dual-time travel clock with snooze and sleep

Yacht Boy 400

The Best in Value



timer. FM band is stereophonic with your headphones. The lighted LCD panel is easy to read in the dark. Comes with a form-fitting pouch, integral telescoping antenna and advanced external antenna on a compact reel, carry-strap, batteries, earphones and complete instructions.

Made by Germany's Grundig.
World leader in shortwave radios, the 400 measures just 7-3/4"L x 4-1/4"H x 1-1/4"W; weighs only 20 oz. It slips easily into your carry-on for travel and fits on a nightstand, office credenza, or yacht cabin console. One-year warranty.

Grundig's Yacht Boy 400 Named Editor's Choice.
Passport To World Band Radio is regarded as the leading authority of the shortwave industry. Here's what their testing expert wrote about the Grundig Yacht Boy 400:

"Best performance for price size category, and among the choicest portables of any size, at any price."

"The 400's FM performance is right up there with the very best among world band radios."

Scanning Receivers

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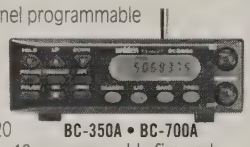
Scan the Action!
- Ham Radio
- Police, Fire
- Emergency
- Weather
- More ...

BC-147XLT-1
BC-148XLT-1

▶UNIDEN BC-147XLT-1 16 channel Base unit with 10 bands, including weather. Covers 29-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 & 470-512MHz. Two-digit LED display shows the current channel selection and scanning. Keyboard Entry; Direct Channel Access; Manual Step Tuning; Scan; Lockout; Priority; Review; Weather Search; Automatic Squelch; Track-Tuning; Memory Back-up, 3 Scan Speeds. 9"w x 2¾"h x 6½"d, 1.2 lbs **$89.95**

▶UNIDEN BC-148XLT-1 16 channels, 10 bands with weather alert. Programmable; Digital; AC/DC operation. Frequency coverage: 29-54, 136-174 and 406-512MHz. Weather button; Priority; Lockout button; Squelch. AC adapter and telescoping antenna included. 9"w x 2¾"h x 6½"d, 1.2 lbs..... **$99.95**

▶UNIDEN BC-350A 50 channel programmable Mobile or Base unit with aircraft; 11 bands, LCD display; Super Turbo scan-100 channels per second; 20 programmable private channels; 20 programmable police channels; 10 programmable fire and emergency channels; Band scan for aircraft; Marine & weather; Band search. Mounting bracket; AC adapter, DC & cigarette power cords included. 5¼" x 6 15/16" x 1⅝", 1 lb. 11 oz.... **$109.95**

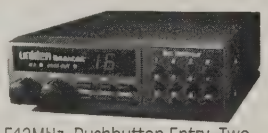


BC-350A • BC-700A

▶UNIDEN BC-700A 50 channel programmable Mobile or Base unit scanner with aircraft 12 bands, LCD display, Turbo Scan™.Same as BC-350A with 800MHz (no cellular) **$159.95**

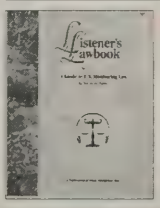
▶UNIDEN BC-178XLT 100 channel programmable Base unit with aircraft. 11 bands. and 5 scanning banks, LCD display; TurboScan™ & search; Weather scan & search; 5 priority channels; Data skip; Service search; Automatic squelch; Programmable delay, AC adapter included. 9" x 6½" x 2¾", 1 lb. 7 oz..... **$139.95**

▶UNIDEN BC-560XLA 16 channel, programmable mobile unit. 10 bands: 29.0-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 & 470-512MHz. Pushbutton Entry; Two-Digit LED Display; Review Key; Priority; Memory Back-up; Channel Lockout; Direct Channel Access; Weather Search; Built-in Delay; Track Tuning. 13.8V DC. Mobile mounting bracket and AC adapter included. 6⅞"w x 1⅝"h x 5½"d, 1¼ lbs **$89.95**



▶UNIDEN BC-760XLT 100 programmable channels, 5 scanning banks. 12 bands cover 29-54, 118-136, 144-174, 406-510, 470-512 & 806-956 MHz (no cellular). Auto search; Priority. 13.8V DC or 117V with AC adapter. 6⅛"w x 1⅝"h x 7¾"d, 1 lb, 3 oz . **$209.95**

▶UNIDEN BCT-7 Bear Tracker 800 Pre-programmed with all frequencies for Highway Patrol, D.O.T, Local/County Police, News, Fire, Aircraft, CB. Selectable by state (except HI). 12 bands, 100 user programmable channels: Highway Patrol Priority Alert; Data Skip, Wx Scan. 13.8 VDC. AC adapter and mobile mount included. 5"w x 7"d x 1⅝"h, 1 lb, 11 oz...**$179.95**



GROVE Listener's Lawbook Contains all of the latest listening laws across the country, state by state (as applicable). Includes the new anti-cellular scanner amendment and a thorough discussion, in simple language, of how these laws affect your listening hobby. A must for scanner enthusiasts BOK-16 **$9.95**

▶UNIDEN BC-860XLT Programmable scanner with Aircraft 100 channels 12 bands, 10 banks. Covers 29 to 956MHz (no cellular). Full frequency LCD; TwinTurbo™ scan and search; One-touch weather scan; Manual channel access; Automatic squelch; 9"w x 2¼"h x 6½"d, 1.2 lbs...**$169.95**

▶UNIDEN BC-890XLT 200 channel programmable mobile or base with aircraft, military air & 1¾ m Ham Band. 14 bands, 10 scanning banks. LCD, TurboScan™; 10 priority channels; VFO control; Frequency transfer; Autostore and sorting; Count key; Weather alert; Optional CTCSS; AC adapter. 10½" x 7½" x 3½", 3 lb. 10 oz..... **$239.95**

BC-890XLT • BC-9000XLT

▶UNIDEN BC-9000XLT 500 channel continuous band scanner, covers 25-1300 MHz (no cellular). 20 banks. VFO control; 10 priority channels; AM, WFM & NFM modes; TurboScan™ and Search; LCD dot matrix alpha display; Data skip; Frequency transfer; Automatic store; Aux. line output for recording; optional CTCSS., AC adapter included. 10½"w x 7½"d x 3½"h, 4 lbs ..**$399.95**

▶UNIDEN BC-60XLT 10 channel, programmable handheld scanner, 10 bands. Two-digit LCD display; review; One touch weather battery-low indicator, built-in scan delay, keypad lockout, AC/DC operation- AC adapter included, 4AA batteries required for DC operation (not included). 2⅝"w x 6¾"h x 1½"d, 10½ oz **$99.95**

BC-60XLT
BC-80XLT

▶UNIDEN BC-80XLT 50 channel, programmable handheld scanner. Covers 29-956MHz (no cellular). 11 bands, 5 banks, 5 priority channels, one touch weather. Manual channel access; Bands search; Full frequency LCD display; Battery-low indicator. AC /DC operation-AC adapter included, 4-AA Nicad or alkaline batteries (not included) required for DC operation. 2⅝ w x 6¾"h x 1½"d, 10½ oz..... **$159.95**

▶UNIDEN BC-120XLT 100 channel programmable handheld scanner with Aircraft coverage. 11 bands, 10 scanning banks, , LCD display, Turbo Scan™ and search. One touch weather, 10 priority channels, data skip, memory backup. Belt clip, battery and wall charger included. 2½"w x 1¾"d x 6"h, 12.6 oz... **$139.95**

BC-120XLT
BC-220XLT

▶UNIDEN BC-220XLT 200 ch programmable handheld scanner with Aircraft &800 MHz (no cellular). 12 bands, 10 scanning banks. Programmable search. LCD frequency display, Turbo Scan™ and search. One touch weather access, 10 priority channels, data skip, memory backup. Belt clip, battery and wall charger incl. 2½"w x 1¾"d x 6"h, 12.6 oz... CLOSE-OUT **$229.95**

▶UNIDEN BC-3000XLT 400 channel continuous band scanner. Covers 25 to 1300MHz (no cellular) in 12 bands. 20 scanning banks, 10 priority channels. VFO control; TurboScan™ and search, auto-weather, auto-store; channel lockout. Rechargeable nicad battery and charger. 2½"w x 1¾"d x 6"h, 12.6 oz ... **$379.95**

BC-3000XLT

▶UNIDEN SC-150B "SPORTCAT" 100 channel programmable handheld scanner with aircraft and 800 MHz (no cellular). Designed for the racing fan with 10 one-touch, direct access keys for instant selection of active sports channels. Listen in on the action at motor racing, air shows and special events.12 bands, 10 scanning banks. LCD display, programmed band search. TurboScan™ scans at 100 channels/second, allowing instant access to up to 100 memorized frequencies in the 29-54, 108-174, 406-512 & 806-956MHz band. Ten preprogrammed TurboSearch keys allow band-edge to band-edge frequency locating at 300 channels per second. One touch weather, data skip. Rechargeable battery pack, wall charger, flexible antenna, belt clip & earphone included. 2½" w x 1¾"d x 6"h, 12 oz..... **$179.95**

SCC-150B

AOR

AR-2700 AR-3000A AR-8000

▶AOR AR-2700 Wide band receiver covering 500kHz-1300MHz (cellular blocked). AM, NFM and WFM modes, selectable tuning steps, 500 memory channels: (10 banks x 50 Search banks), 10 VFO, 1 priority. 30 channels/per second search and scan rate, delay, pause and priority. Auto-Mode tuning with pre-programmed band plan to simplify operation. Optional voice recording, computer control, and second radio cloning. BNC antenna input. Operates from internal nicad batteries, 4-AA alkalines or 9-16V ext. DC....**$399.95**

▶AOR AR-3000A Scanner/Receiver for serious wide-spectrum monitoring. Continuous tuning via keypad or tuning dial 100kHz–2036 MHz (cellular blocked). All-mode reception, 400 memory channels, 50 channel per second scan and search rate. 15 band pass filters and low noise, wide dynamic range GaAs FET RF amplifiers. Backlit LCD, programmable tuning steps, priority, delay, recorder activator. 9-16V DC. Includes 120V AC adapter, telescopic whip (BNC antenna input) and DC lead. 5½"w x 3"h x 7⅞"d, 2.5 lbs **$1069.00**

▶AOR AR-8000 All mode wide band receiver for general purpose monitoring. Covers 500kHz–1900 MHz (cellular blocked), all mode reception, 1000 memory channels, Top-panel rotary knob tunes frequencies and channels, dual VFOs toggle between two-frequency simplex. Selectable tuning steps, 30 channels/second scan/search speed. Large, edge-lit, multi-line, 44 character alphanumeric display. Enter 7 characters of information and store along with frequency and other settings in the 1000 memories. Second-radio cloning, power saver. New User mode for initial ease of operation, and Expert Mode. Uses nicad or alkaline batteries Nicads & charger included. 2¾"w x 6"h x 1½"d,13 oz...**$599.95**

ICOM

R-100-11 R-7100-12

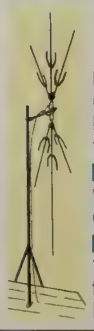
R-1-15

▶ICOM R-100-11 Base or Mobile covering 100kHz-1856 MHz (800-900 blocked) with FM, wide FM and AM modes. Keyboard or Manual tuning. Scan functions, 121 multi-function memories, 24-hour clock, 3 antenna inputs, telescoping antenna, mobile mount. 13.8V, opt. AC adapter. 5¾"w x 2"h x 7½"d, 3 lbs..... **CALL**

▶ICOM R-7100-12 Scanning Receiver covering 25 to 800 and 900-2000MHz. Dial and keyboard entry, 900 numbered memory channels. Multiple scanning capabilities with new window scan, all-mode squelch. Clock with timer, optional TV receive capability ..... **CALL**

▶ICOM R-1-15 Handheld Receiver covering 100kHz to 1300 MHz (800-900 blocked) FM, wide FM & AM. modes. 100 memories, scanning. Rotary tune or direct keyboard entry. LCD display, 24-hr clock/timer, signal indicator, power-saver. Built-in nicad battery; charger, or 6-16VDC 1⅞"w x 4"h x 1½"d .. **CALL**

Channel Master
Scanner Antenna



E-X-T-E-N-D Scanner Range many times with an externally mounted Channel Master Monitenna. Provides best scanner reception for the 30-50, 148-174, 450-470, 470-512 & 800-912 MHz bands.

▶Model 5094A High-strength aluminum, and weather protected. Comes with 50 ft. length of coaxial cable and Motorola-type plug..... **$39.95**

▶Model 5095A Everything for roof-top installation: Monitenna, 50 ft. coaxial cable with plug, 5 ft. tri-mast mount, 2 ft. extension standout, double headed nails, and sealing washers **$49.95**

maxon SYSTEMS Personal Communicators

Low Power • 1/4 mile average range • No license required

Dual conversion superhet receivers provide crisp, clear voice transmission. All models are compatible use for group communications. Voice activated (VOX) lets you talk-to-transmit, or you can use push-to-talk (PTT).

Channels: (A) 49.830 MHz, (B) 49.845 MHz, (C) 49.860 MHz, (D) 49.875 MHZ, (E) 49.890 MHz.

▶**MX-49SX** Single-channel unit featuring a lightweight adjustable headset with retractable whip antenna, LED indicator, boom microphone with windscreen and battery charger jack. Range up to 1/4 mile. Requires two "AA" regular or rechargeable batteries . 5" x 2½" x 1", 9 oz. Specify channel A, B, or E..... **$29.95**

▶**MX-49FX** 5 channels and a combination earphone-microphone that that picks up voice vibrations from the ear canal for transmit, and also provides receive audio. Built-in antenna gives up to 1/8 mile range, and will not interfere with helmets. Remote PTT button and channel selector. Requires 3 "AA" batteries. 5½" x 3" x 1", 6 oz. Channels A, B, C, D & E **$59.95**

▶**MX-49HX** 5 channels, for motorcycling, snow mobiling, etc. The helmet-adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted off/on/volume, VOX sensitivity and channel selector. Jacks for optional passenger intercom headset. Requires 3 "AA" batteries. 3" x 5½"x 1", 6½ oz. Channels A, B, C, D & E **$49.95**

▶**PC-10** Single channel, compatible with all Maxon 49MHz units. PTT or VOX.operation. Detachable headset with boom microphone included. Approximately 1/4-mile range. VOX or PTT operation, call tone. Requires 3 "AA" alkaline batteries. Specify channel A, B, or E **$39.95**

▶**PC-50** Similar to PC-10, but 5 channels – A, B, C, D & E.....**$59.95**

Low Power VHF & UHF Handhelds

Ideal for short range communications...

Recreation, construction sites, in factories, security work, etc.

▶**COURIER M-510** 10 synthesized VHF channels programmable 144 to 174MHz. 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license application included. 4¼"h x 2 1/16"w x 1⅜"d, 15 oz..... **$269.95**

▶ **COURIER MU-510** 10 synthesized UHF channels programmable from 450MHz–470MHz. 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license application included. 4¼"h x 2 1/16"w x 1⅜"d, 15 oz..... **$299.95**

▶**COURIER M-54** VHF, 4 channels, 5W, comes with 151.625 MHz installed.5¼"h x 2⅜"w x 1½"d 15 oz..... **$199.95**

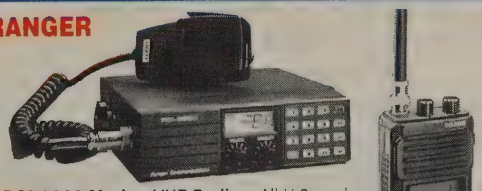
▶**RANGER RCI-1000** Two VHF channels, 1W output. Includes two sets of crystals installed for 151.625 and 154.57MHz or 154.60 and 154.57MHz. Rechargeable nicad battery and AC charger, flexible antenna. 4⅞"h x 2½"w x ⅞"d, 12 oz **$139.95**

▶**MAXON GMRS-10** (not pictured) UHF, single channel with 462.625MHz. 100mW output – up to one mile range. Requires 3 "AA" alkaline batteries. 6"h x 2½"w x 1½"d, 8.2 oz **$99.95**

Order Toll Free & use your Credit Card!

VHF Marine Equipment

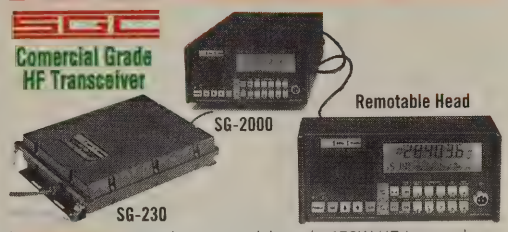
RANGER



▶**RCI-6060** Marine VHF Radio • All U.S. and International Channels • 4 Weather Channels • Keypad entry • All channel scanning • Direct Access to Channel 16 • Dual-Watch Mode • 25W/1W Output • Power Up/Down Microphone Switch • Backlit LCD Display • External Speaker and PA Jacks • Weather Resistant Housing • 3"h x 7½"w x 8¼"d, 2 lbs.....**$169.95**

RCI-8000 Handheld Marine VHF Radio All USA & International Marine Channels • 10 weather Channels • All Channel Scan • Dual Watch • Direct Channel 16 Access • 5W/1W Output • Back-lit LCD Display • Weather Resistant Housing • Rechargeable Battery Pack with Wall Charger • External Power Jack • Time-out Timer • 2⅜"w x 1½"d x 7⅝"h, 1.2 lbs **$169.95**

SGC Comercial Grade HF Transceiver



▶**SG-2000** Rugged commercial grade 150W HF transceiver. Operates A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode, and Data. Programmed with 644 ITU channels and 100 user defined channels that can be set to frequencies within the 1.8–30 MHz range; receives 500kHz-30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories .Adjustable scan speeds/rates. Large, wide-angle LCD with adjustable backlighting for easy night viewing. Operates as a single unit, or the front panel can be removed to function as a remote head. Computer control via RS-232. 12VDC @ 16A. 4¾"h x 10"w x 15"d, 12 lbs **SGC 04-01 $1479.00**

▶**SG-230** The Smartuner® Automatic HF antenna tuner capable of tuning any length antenna from 8 to 80 ft. long within 1.8–30MHz. Rated up to 150W, requires very low RF input for automatic tuning, works on a SSB signal! Microprocessor controls switching of 64 input and 32 output capacitor combinations, plus 256 inductance combinations in a pi-network to tune an unknown antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof for mobile-marine applications. 10–15VDC @ 0.9A.12"w x 16"d x 3"h, 8 lbs..**SGC 54-12 $489.95**

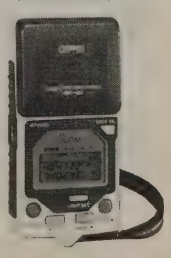
POLYPHASER Low Inductance Copper Strap

Recommended for use with the SG-230 in marine applications. An advantage over wire when used for a ground path because of its lower inductance. For example: 1.5" strap has a lower inductance than #2.0 stranded wire. Easy to cut, solder, etc. Sold by the ft. up to 450' lengths

1.5"w– **95¢/ft.** • 3"w – **$2.75/ft.** • 6"w – **$3.95/ft.**

ICOM Aircraft & GPS

▶**ICOM A-22** VHF Air Band Transceiver Covers (COM) 118.-136.975, (NAV) 108-117.95MHz & 10 WX Channels. 50 memory channels. Programmed scan, memory scan and lock output. 5W output. Instant 121.5MHz NAV features: 200 ch., VOR nav with CDI, radial heading TO/FROM VOR, Auto Bearing Set. Semi-duplex–combines VOR/COM operation. NI-Cd battery & wall Charger. 2½"w x 7¾"h x 1½"d, 1.4 lbs **$599.95**



▶**ICOM GP-22** GPS Receiver (right) Fast and accurate positioning worldwide! Instant navigation, course and speed over ground. Cross track error, ETA, bearing and range to a waypoint and more! 2⅝"w x 1⅛"d x 5⅛"h, 3½ oz

Call for Price

UNIDEN

▶**MC-535** 80 channel Marine VHF Radio • All USA & International Channels • Instant CH 16 • 10 Weather Channels • Memory Scan • Dual Watch • LED Channel Display • 25Watt/1 Watt Output • Weather Resistant Housing • Front Speaker • 13.8V DC @ 5A • 6⅛"w x 7 9/16"d x 2 3/16"h, 2.4 lbs **$139.95**

▶**MC-635** • Features similar to MC-535 but 90 Channels • LCD Channel Display • 6⅜ "w x 8"d x 2⅛"h **$149.95**

▶**MC-795** 90 channel Marine VHF Radio. Same as MC-635 but additional features: Weather Alert • Group Scan Feature • All Channel Scan • Weather Resistant Microphone **$169.95**

▶**HH-979** 90 channel Handheld Marine VHF Radio • All USA & International Channels • Instant Channel 16 • 5 watt and 1 watt output • Rotary Switch Channel Display • Weather Resistant Housing and Microphone • 13.8V DC or supplied Nicad battery pack • 2⅛"w x 1½"d x 7"h **$159.95**

▶**HH-980** 90 channel Handheld Marine VHF Radio Same features as HH-979 but cast aluminum case • watertight, • weather alert • 3 year warranty • **$249.95**

ICOM VHF Marine Radio

▶**IC-M10A** Miniature Handheld Marine VHF Radio0 Programmable, all USA & International Channels & WX • Independent Channel 16 • 24 Memories • Full Function/Priority Scanner • Dual/Tri-watch • 3W output • Power-Saver • Large Back-it LCD Display • CALL key for hailing channels • "AA" Alkaline battery pack provides 2-14 hours for each set (Batteries not included). 2⅜"w x 1 9/16"d x 4⅞"h, 12 oz **$219.95**

SHAKESPEARE Marine Antennas

▶**5202** (A) Collinear-phased 5/8-wave elements. 6dB gain. 8 ft. long, handles 50W. DC grounded. Chrome-plated brass ferrule. Includes 20 ft. of coaxial cable with connector..... **$69.95**

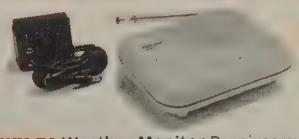
▶**497** (B) Collinear phase 5/8-wave elements. 6 db gain. 8 ft. long, handles 50W - **not** DC grounded. Smaller diameter absorbs flex. Includes 20 ft. coaxial cable/connector **$49.95**

▶**5206-C** (C) Economy model, end fed, 8' long with 6dB gain. Handles 50W, DC grounded. 15 ft. coax/connector..... **$39.95**

▶**420** (D) Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5 ft. long. Polycarbonate lift-and-lay deck mount with leveling plate, hardware and 20 ft coax cable/connector **$59.95**

▶**495** (E) Lift-and-lay polycarbonate deck mount **$14.95**

▶**366H** (F) Ratchet mount with handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"x14 male threads. Chrome plated zamac **$29.95**



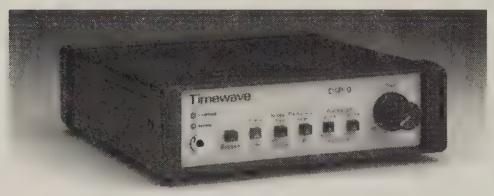
maxon SYSTEMS Weather Monitor

▶**WX-70** Weather Monitor Receives weather service broadcasts on seven N.O.A.A. stations: 162.550, 162.400, 162.425, 162.475, 162.450, 162.500, and 162.525MHz. Three different severe weather "Alert" warning modes. 110V with supplied AC adapter, uses a 9V battery for back-up **$49.95**

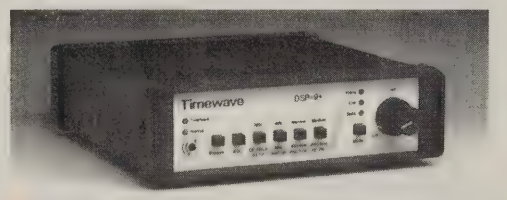
TIMEWAVE TECHNOLOGY INC

Advanced DSP Filters...

Improve reception by simultaneously reducing random noise, heterodynes, QRM and providing razor sharp audio for SSB/CW modes. The DSP filter features 3rd generation 16-bit processing and 16-bit DSP A/D and D/A chip. Processor runs at 13 million instructions per second allowing multiple functions at the same time. A must for the weak signals and noisy bands. Simple installation at receiver audio output, drives speakers or headphones directly.



▶**DSP-9** Version 3.0 CW/SSB Filter Push button selectable bandpass, automatic notch and random noise filters for SSB/CW and Data. SSB filter bandwidths: 1.6, 2.0, 2.4kHz. or 1.8, 2.4, 3.1 kHz, field programmable. CW filter bandwidths: 100, 200 and 500Hz with center frequencies of 600/750Hz or 400/500, field programmable. AGC on SSB with the hetrodyne button pushed in. Reduces white noise, static, QRM, etc–dramatically! Excellent for HF and weak signal Satellite work. Self-test mode can be initiated by user. FCC type A & B accepted. 12VDC @ 1A. 6"w x 6"d x 1¾"h, 2 lbs..... **$169.00**



▶**DSP-9 Plus** Version 3.0 SSB/CW/Data Filters Push button selectable bandpass, automatic notch and random noise filter for SSB/CW and Data. SSB filter bandwidths 1.6, 2.0, 2.4,kHz or 1.8, 2A, 3.1 kHz, field programmable. CW filter bandwidths 100, 200, and 500 Hz with center frequencies of 400, 500, 600, 800 Hz; any two field programmable. Optimum data filter for HF Packet, GTOR®, AMTOR, and RTTY. RTTY remodulator for perfect copy of signals below the noise level. ALL data modes have selectable center frequencies user programmable, default is USA std. 2210 Hz. AGC button for wider dynamic range, plus acts as an automatic CW boost and peaking enhancer. Auxiliary audio output jack for data, PTT input for break-in. CW sidetone, bypass and muting. Relay passes audio directly to speaker with pushbutton bypass or power off, self-test. FCC type A & B accepted. 12VDC- 1A. 6"w x 6"d x1¾"h, 2.2 lbs..... **$199.95**

▶**DSP-59 Plus** Version 3.0 Perfect for the Ham and SWL hobbyist. Features 225 combinations of high and low pass filters for voice and special modes. Over 300 CW and data filters (25 to 600Hz) allow the user to select almost any filter needed for a specific application, including RTTY, SSTV, AMTOR, G-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax and AM. Remodulator for RTTY for perfect copy of signals below the noise level. Voice filters from 200 Hz (highpass). 13 CW center frequencies from 400 Hz. to 1.0 kHz on front panel. Push button selection of relay, bypass, AGC, HP/LP/BP, hetrodyne elimination and random noise reduction. Kills hetrodynes with notch up to 50dB. Dramatic random noise reduction from static, lightning crashes, white noise, line noise, etc. Marker for spotting the narrow CW filter, audio generator and self-test mode. FCC type A & B accepted. 12VDC @ 1A. 7½"w x 8"d x 1¾"h, 2.2 lbs..... **$259.95**

Noise Killer Filters

DSP-599ZX
All-Mode DSP Noise Filter

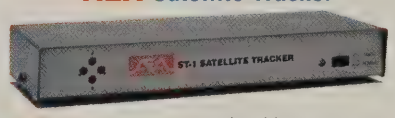
"The most powerful noise and QRM filter in amateur radio"

Proven Timewave Quality anchors the richest feature set of all DSP Noise Filters. The DSP-599ZX combines a hyperspeed DSP processor with and alphanumeric display, quick-select push-buttons and optical encoders to wipe out noise and QRM like never before! Heterodynes disappear like magic, weak signals pop up from the noise, and the razor-sharp filters slice away QRM. The DSP RTTY demodulator pulls out solid copy when you can barely hear a signal. Continuous filter tuning to 5.4 KHz opens up the wider bandwidth modes like shortwave AM broadcast and VHF/UHF FM. It's easy-read, set and recall all of the settings with the backlit alphanumeric LCD display - no quessing with Timewave Calibrated Filters™ and Visible Memory™. 12 VDC @ 1A. 7½ "w x 8"d x 1¾"h, 2.2 lbs..... **$339.95**

- **Hyperspeed DSP - 27ns fast**
- **Enhances voice, data and CW**
- **Demodulates RTTY**
- **Wideband for AM and FM**
- **Two selectable inputs**
- **Programmable input sensitivity**
- **Audio Voltmeter and Generator**
- **Complete self-test**
- **Visible Memories™ - Instant recall**
- **Programmable line output level**
- **Shortwave to narrow SSB listening**
- **LCD Alphanumeric Display**
- **Front panel programming**
- **80 KB RAM on the DSP chip**

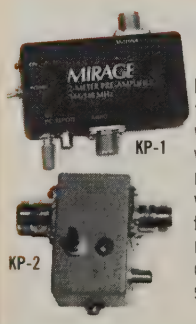
TIMEWAVE
General information, inquiries and customer service
Internet E-Mail: dsp@timewave.com
WWW: http://WWW.timewave.com

AEA Satellite Tracker



▶**AEA ST-1** Satellite Tracker Works with Yaesu 5400B/5600 Az/El rotators, and InstantTrack, QuickTrack, RealTrack software. Tunes FT-736R, TS-790, IC-970, IC-475/275. Automatically controls antennas and tuning . As a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the right up-link/down-link frequencies. As the satellite moves along its path, the antennas track and the transceiver tuning is corrected for the Doppler shift. Uses serial and parallel port from host computer **$369.95**

MIRAGE GaAsFET Preamps for 10, 6, 2, 1¼ meters & 70 cm



Less than 0.8 dB noise figure and 15 to 22dB gain aids in receiving weak signals. Selectable gain prevents receiver intermod. Automatic RF switching up to 160 watts. Choose In-Shack model, or for less loss, the Mast mount model which includes a remote control. Rugged die cast enclosure. Ten models.

See MIRAGE in the Price List

TRIPP LITE — POWER SUPPLIES

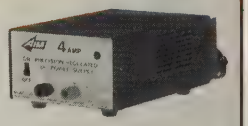
Powerful Values For Ham Operators

▶105-125V AC INPUT, 13.8 V DC output; Tripp Lite's line of reliable, DC power supplies are perfect for all you Ham radio equipment. With a wide selection, including most popular sizes, rugged construction and the best prices in the industry. Trip Lite, in business since 1922, provides a high-quality DC power alternative. 1 year warranty.

▶ .Features include:
- Current-limiting foldback for complete over current protection
- Crowbar Overvoltage protection on 15 amp and larger models
- Solid state, integrated circuitry.
- Metal cases on all models
- High quality filtering for very low ripple/low noise
- Fully regulated output maintains 95% of no-load value
- Unbeatable product support, service and reliability
- Rack mount models available

TRIP MODEL#	CONT. AMPS	ICS AMPS	SIZE (HxWxD)	SHIP WT.	AES PRICE
PR-7	5	7	3¾ x 6½ x 7½	7	**$47.95**
PR-10	7.5	10	4½ x 6¾ x 7¾	10	**63.95**
PR-12	9	12	4½ x 6¾ x 7¾	11	**68.95**
PR-20	16	20	4½ x 6¾ x 7¾	15	**94.95**
PR-30	24	30	6¾ x 6¼ x 10¼	23	**129.95**
PR-40	32	40	6¾ x 10½ x 11½	27	**166.95**
PR-50	37	50	6¾ x 10½ x 11½	30	**199.95**
PR-60	48	60	6¾ x 10½ x 11½	33	**237.95**

AIM ELECTRONICS DC Power



▶**AIM 38-384** Light Duty DC Power Supply Input: 115V AC, Output: 13.8V DC regulated. Rated 4 amps with 5 amp surge. On/off switch, front panel binding posts, LED "on" indicator, fuse protection. 7¾" x 4¾" x 3", 5½ lbs.. **$39.95**

▶**AIM 38-305** AC Adapter Multi-voltage, rated at 500MA. Plugs into wall outlet and converts 117 AC to low voltage DC to operate battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12 volts DC. The cord has multiple application plugs and 9V snaps. **$12.95**

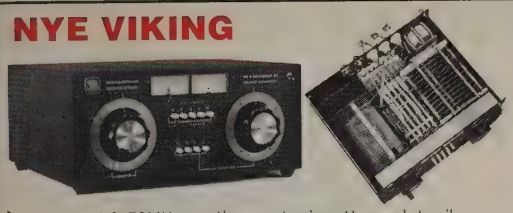
▶**AIM 38-312** Regulated AC Adapter Multi-voltage, rated at 1200MA. Cord has multiple application plugs and 9V snaps Converts 117 VAC to low voltage DC to operate battery powered equipment that requires 1.5, 3, 4.5, 6, 7.5, 9 or 12 V DC..... **$24.95**

RMS SWR & Power Meters

▶**CN-220** Power/SWR Meter (left) Covers 1.8–225MHz, rated at 1.5kW with 15, 150 and 1.5KW ranges. Selectable PEP or average power. Cross-needle single meter design. One scale indicates forward power, the other scale reflected power. SWR is indicated at the crossing point of the two needles. This unique feature makes it possible to read forward power, reflected power and SWR simultaneously. SO-230 connectors. 5½ w" x 3⅜"h x 4⅜"d, 1.8 lbs **$130.99**

▶**W-450** Power/SWR Meter (right) Covers 144 to 170 and 400 to 470 MHz ranges. Indicates average power up to 150 watts and SWR. SO-239 connectors. 4¼"h x 2½"w x 1¼"d, 7 oz.. **$69.99**

NYE VIKING



▶**MB-V-A** 1.8–30MHz continuous tuning. Heavy duty silver plated variable inductor with 25:1 vernier dial. 7kV variable capacitor and 15kV switch selected fixed output capacitors. Tunes most antennas 1/4-wave length or longer from 40–2000Ω but some antennas may not tune at 1.8 MHz. Automatic SWR metering without reset or calibration. Separate automatically switched 300W/3KW RMS wattmeter. Precision 2½" backlit meters display SWR and Power, continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas: 2 coaxial, single wire and balanced line, and bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω, and unbalanced output down to 20Ω. Requires 9V battery for meter and external 12VDC for meter lights. 14¾"w x 6¾"h x 12¼"d, 18 lbs **$729.95**

▶**MB-V-B** same specifications as MB-V-A above, except no Power or SWR metering capability **$599.95**

NYE Low Pass Filter Installs between transmitter output and antenna. Eliminates Television Interference caused by harmonics from 1.8–30MHz transmitters. Rated at 2KW, handles 5KW SSB peaks. Flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors, both ends ..... ▶**020-001** **$49.00**

ASTATIC Microphones

▶ **D-104L (left)** The original "super talk power" microphone, a favorite of hams for decades! High output and 300-7500Hz response with rising characteristics between 500 and 4000 Hz, provides maximum intelligibility. Shock proof cartridge with high impedance crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille, all heavy chrome plated. 3" dia. x 1⅛"d, 14 oz. Requires T-UG9 stand **$39.95**

▶ **10DA-L (center)** High impedance dynamic SSB microphone. Controlled 300–3000 Hz response provides high attenuation of the unwanted sideband and better copy through interference. 2 7/16"w x 2⅛"h x 3 1/16"d, 17 oz. Requires T-UG9 stand **$49.95**

▶ **T-UG9 (right)** Accepts the D-104-L or 10DA-L microphone heads. Built-in adjustable preamplifier with an output impedance that matches most transmitters. Side switch bar for PTT with slide-up clamp for locking down. Height is 8½" without head, base is 5½"diameter. Chrome neck, grey base, 6-wire coiled cable. Requires 9V battery for the preamplifier..... **$49.95**

Solve your noise problems with Digital Signal Processing! ...

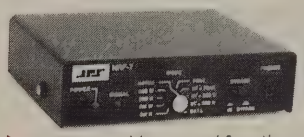
JPS Communications, Inc

Noise & Interference Reduction Unit

▶**NIR-10** Simply installs between the audio output and speaker of your communications receiver and provides real-time 40MHz Digital Signal Processing to enhance the quality of received voice and CW signals. NIR Mode: reduces or eliminates heterodynes, ignition, power line and white noise, and RTTY interference. Peak function: reduces white noise interference. Notch Filter mode: easily removes multiple heterodynes. Band Pass mode: features an adjustable center frequency, selectable bandwidths, extremely steep skirts and greater than 60 dB ultimate rejection. Requires 12VDC @ 1A .2"h x 7"w x 6"d, 2 lbs **$279.95**

DSP Spectral Notch Filter

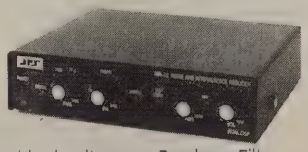
▶ **NF-60** Digital Signal Processing automatically removes MULTIPLE interfering heterodynes (tones and whistles), tune-ups and CW/RTTY tones. Simple connection between you receiver audio output and speaker. Built-in audio power amplifier. 12VDC @ 1A. 1¾"h x 6"w x 4⅜"d, 2 lbs..... **$149.95**



Noise Reducer and Filter Unit

▶ **NRF-7** Provides several functions that improve reception for Amateurs and SWLs. Reduces or eliminates atmospheric (white/pink) noise and multiple heterodynes. No-delay filters for AMTOR, PACTOR and break-in CW. Sharp, non-ringing CW and voice filters, plus auto NOTCH filter and white noise reduction., Installs between receiver output and speaker, built-in audio amplifier. 12VDC. 1¾"h x 6½"w x 5"d, 2 lbs.....**$199.95**

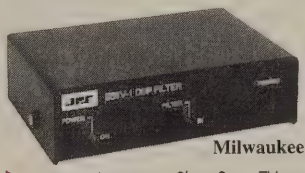
Dual DSP Noise Reduction & Filter Unit



▶**NIR-12** Dual DSPs provide simultaneous Bandpass Filter, Noise Reduction (2 types) and Multiple Tone Removal. Both Spectral Subtraction (NIR) and Dynamic Peaking noise reduction methods eliminate Impulse Noise and White Noise.An Automatic NIR mode sets optimum noise reduction based on the measured signal-to-noise ratio of the received signal. The Notch filter removes multiple heterodynes, including CW and RTTY tones, from desired voice signals. Super Selective linear phase FIR filters are continuously variable in both bandwidth and center frequency. Bandwidth is adjustable between 50 Hz and 3200 Hz. internal access to the dual DSPs is provided via RS-232. Simply installs between receiver audio output and speaker. 12V DC. 1⅞"h x 6½"w x 7¾"d, 4 lbs..... **$329.95**

Wide Band Noise and Tone Remover

▶ **NTR-1** A general purpose audio processing unit for noise reduction and multiple tone removal for AM/FM, or other wideband 160– 6600Hz signals. Provides narrow band100 to 3400Hz operation for SSB, CW or Data. Reduces atmospheric noise with dynamic peaking and removes multiple tones from voice signals. Installs at receiver audio output, built-in audio power amplifier. 12VDC. 1¾"h x 6½ "w x 5"d, 2 lbs. **$159.95**



DSP Filter for Slow Scan TV

Milwaukee only

▶ **SSTV-1** Improves Slow Scan TV reception. Two DSP filters reduce or eliminate adjacent channel and in-band interference which can cause "tears" and color shifts..Sharp cutoff passband is centered at the1200Hz sync pulse frequency, yet wide enough to pass VIS and other information. Linear phase, steep skirted 1500Hz–2300Hz passband for picture data. Removes any offending tones, interference, etc. below 1050Hz and above 2300Hz. 12VDC, 1¾"h x 6"w x 4¼"d, 2 lbs **$149.95**

Antenna Noise Canceller

▶**ANC-4** Provides a means of eliminating local received local received noise before it enters the receiver. Unit installs between antenna and receiver input and includes two noise antennas: whip and wire. Two front panel adjustments, PHASE and GAIN, allow local noise levels to be virtually eliminated from your receiver and let your hear what's going on underneath. It is especially effective at cancelling local computer noise, electrical equipment noise and POWER LINE NOISE. Automatic BYPASS on transmit, up to 150W, useable as an active antenna.12V DC 1¾"h x 6"w x 4⅜"d, 2 lbs **$169.95**

▶**Power Pack** 115V AC adapter for above JPS units..... **$16.00**

DCI

Two Meter Bandpass Filter

Installs between your 2m rig and antenna to Reduce the strength of out of band interfering signals while allowing the signals you want to hear pass through at full strength.

- Eliminate the random squeals, squawks, beeps and strange voices from your VHF radio (Intermod).
- Hear the signals you want to hear even in crowded urban centers with strong police and paging systems.
- Design: Four helical resonators with aperture coupling
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- Made of extruded aluminum, copper and brass, PL-259 connectors. 12w" x 3"h 5"d, 2 lb, 11oz • Totally passive, does not need DC power. ▶**DCI-146-4H** **$89.00**

▶**DCI 445-10C** 440MHz version **$109.00**

SHURE Microphones

▶ **444D** A dual-impedance CONTROLLED MAGNETIC® fixed station microphone with a 200 to 6000Hz response, tailored for optimum speech intelligibility. Switch selectable for high (15kΩ–10MΩ) or low (200–1000Ω) impedance inputs, and for Normal or VOX operation. Momentary or locking push-to-talk switch bar, 2½" vertical height adjustment. Coiled three-conductor microphone cord, supplied with a wiring guide, requiresa mating connector. 2 lbs, 6 oz. **$86.95**

▶ **526T** Series II SUPER PUNCH® A dynamic microphone with a solid-state preamplifier and adjustable volume control. Works into 500 to 5000Ω input impedances allowing it to replace ceramic or dynamic original equipment microphones. Tailored 200 to 6000Hz frequency response provides effective audio like the 444D. Momentary or locking push-to-talk bar. Comes with a coiled 5-conductor cord and wiring guide. Requires connector and 9V battery. 2 lbs, 11 oz.....**$112.95**

▶ **404C** A high-Impedance (15kΩ–100kΩ) hand held microphone with a high output level and 200–4000Hz response. Small, light and compact case fits naturally and comfortably in the palm of the hand. Requires connector. 17 oz..**$59.95**

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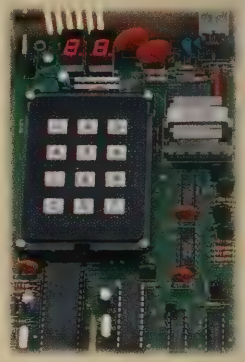

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PRIVATE PATCH V

Our top of the line interconnect! Private Patch V is a user programmable multi-mode interconnect that offers four user selectable operating modes: 1. Enhanced Sampling 2. VOX Simplex 3. Semi-Duplex 4. Repeater Controller. FCC and DOC approved. No other patch offers as many modes and features!
12-15 VDC 11.5" W x 7.5" D x 2.25" H 3.8 lbs.

9801 Electronic Voice Delay Option for Private Patch V

A plug in board that provides a full 1/2 second delayed telephone audio to eliminate word clipping when using Private Patch V with very slow switching transceivers in VOX simplex.

CS-900 CONTROL STATION INTERCONNECT

The CS-900 is a VOX simplex interconnect for use with any simplex transceiver. Can also be used through remotely located repeaters (from your base) for additional range. The standard 1/2 second Electronic Voice Delay totally eliminates syllable or word clipping and results in unsurpassed simplex performance. Connects to the Mic and Speaker jacks of your simplex transceiver. FCC and DOC approved. (Transceiver switching speed does not affect performance).
12-15 VDC 7.9" W x 7.5" D x 2" H 2.5 lbs.

CS-800 FULL OR HALF DUPLEX INTERCONNECT

The CS-800 operates Full Or Half duplex and also has a built-in Repeater Controller. Simply connects to the Mic and Speaker jacks of your dual band transceiver. FCC and DOC approved. Best deal going in a full duplex interconnect!
12-15 VDC 7.9" W x 7.5" D x 2" H 2.5 lbs.

CS-700 INTELLIGENT INTERCONNECT

The CS-700 is for simplex operation and offers selectable VOX Enhanced or VOX Controlled Sampling which allows the mobile to maintain positive control at all times. Complete with 9 memory speed dialer. Requires an internal connection to the transceiver detector. Best results occur with fast switching transceivers.
12-15 VDC 7.9" W x 7.5" D x 2" H 2.5 lbs.

COMMUNICATIONS DECODERS

CD-1 COMMUNICATIONS DECODER UNIT

Decodes and displays all 50 CTCSS tones, 104 DCS codes and all 16 DTMF digits when connected to any scanner receiver or service monitor. Useful for service work or determining the correct codes to operate open repeaters and autopatches. DTMF sequences are slowly displayed a second time just in case the real time digits were too fast to comprehend.
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CD-2 COMMUNICATIONS DECODER UNIT

Looks and operates similar to CD-1 but also includes an RS 232 serial port to export decoded CTCSS, DCS or DTMF data to your PC.
12-15 VDC 4.9" W x 4.5" D x 1.9" H 1 lb.

LT-2 TRUNKING DECODER UNIT

Decodes and displays user number and home repeater for all subscribers on E.F. Johnson LTR® Trunking repeaters. All decoded data is exported on the RS-232 Serial Port.
12-15 VDC 4.9" W x 4.5" D x 1.9" H 1 lb.

CD-2P APPLICATION PROGRAM

Maintains a history of CTCSS/DCS/DTMF data from your CD-2 occurring on the channel being monitored, creates useage graphs etc.
PC/DOS based.

LT-2P APPLICATION PROGRAM

Maintains a history of all decoded subcarrier data from your LT-2 occuring on LTR® Trunking systems you are monitoring. Creates usage graphs etc.
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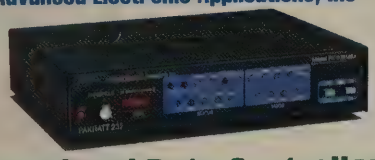
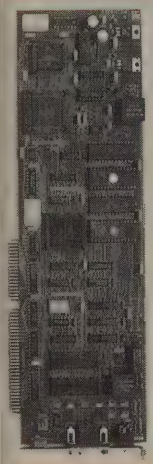


Exceptional Data Controllers for the Radio Amateur

PK-232MBX • PK-12 • PK-96 • DSP-2232 • DSP-1232
See separate AEA Digital page for complete Product Descriptions Photos and Prices.



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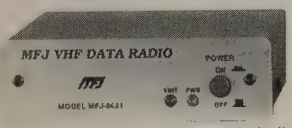
▶**PCI-4000/M** Multimode HF Modem. A full-size 13½" DSP card for 386 or 486 PC's. Provides the best all-around performance on RTTY, AMTOR, PACTOR and CLOVER modes. Lets you work those signals that are just too weak for most other modes. The operating software for your PC is included and updates are available through the HAL Techline.Includes a phono connector cable to your radio system and a comprehensive technical manual. Third party software is available for specific operating requirements. One-year HAL warranty **$699.95**

HAL TECHLINE: 217-367-5547

Data Radios

▶**KANTRONICS D4-10** A high speed, wide bandwidth, UHF FM transceiver – a perfect match for the Data Engine or KPC-9612. Coupled with either TNC, the D4-10 can operate at speeds as high as 19,200 baud. Ouput is 10W. Two channels, crystals for 430.55 MHz installed, other frequencies are available by special order. 12 VDC. 1¾"h x 6"w x 8"d, 2 lbs **$339.95**



▶**MFJ-8621** 2 Meter Packet Only Data Radio. A dedicated unit for high-performance packet through 9600 baud. Plug in TNC cable*, your antenna and power – your ready for error free packet; nothing to adjust. Crystals installed for 145.01 MHz. 5 watts output. 12 VDC @ 1 amp. 5"w x 5½"d x 1½"h . **$109.95**

***See Price list for pre-wired 8621-to-TNC cables. Crystals for other packet channels available thru MFJ, call 1-800-647-1800.**

▶The DIGITAL Communications Handbook (TAB 633626).. **$14.95**
▶Your Gateway to PACKET Radio (ARR 355)..... **12.00**
▶Your PACKET Companion (ARR 358)..... **8.00**

Kantronics

▶ **KPC-3** Packet Communicator This small, 1200 baud TNC is ideal for both new and experienced users. And now, the KPC-3 supports GPS operations and is APRS compatible. Requires so little power, it can run on a 9-volt battery, so it is perfectly suited for GPS and other portable applications. Available with either 32K or 128K RAM and can be controlled remotely. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS, KISS (TCP/IP), and GPS modes. 6–25 VDC @ <45 mA. ¾"h x 5¼"w x 5¼"d, 11 oz **$119.95**

▶**KPC-9612** Packet Communicator As a dual-speed, dual-port TNC, the KPC-9612 can operate at both 9600 and 1200 baud at the same time (the 9600 baud port can be configured for 19,200 baud). With Kantronics' new optional K-Net networking EPROM, the KPC-9612 can operated as both a node an a TNC at the same time. It is available with either 32K or 128K RAM and can be controlled remotely. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS. KISS and Multi-drop KISS. 6–25 VDC @ <45 mA. ¾"h x 6¼"w x 6¼"d, 13 oz.....**$199.95**

▶**KAM Plus** All Mode Communicator G-TOR™, Pactor, RTTY, CW, ASCII, and NAVTEX/AMTEX. Two radio ports, operates any HF mode and VHF Packet at the same time. Has 128K battery-backed RAM (expandable to 512K) and a real-time clock. Also features "TOR Standby" for automatic link recognition in all TOR modes, dual level command set for beginners or veterans, and on-line helps. Uses standard shifts and programmable for any shift. Operates RS-232 or TTL. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS, and KISS (TCP/IP). 12 VDC @ <260mA. 1¾"h x 6"w x 9"d, 2½ ..... **CALL**

▶**KPC-4** Packet Communicator Contains two built-in 1200 baud modems for simultaneous operation, 32K of RAM, and the Kantronics KA-Node networking firmware. Ideal for a local packet switch! 12VDC @ <200 mA. 1¾"h x 6"w x 9"d, 2¼ lbs . **$239.95**

▶**Data Engine** Dual port High-Speed TNC Configure with one or two modems and data rates up to 19,200 baud. With two modes installed, the Data Engine is capable of simultaneous operation on both ports. Standard firmware includes KA-Node for networking; G8BPQ and JNOS firmware are available via the factory BBS. Shipped with 64K of battery backed RAM and V40 processor running at 10MHz. Open Open architecture, developers manuals are available. 1¾"h x 6"w x 9"d, 2½ lbs . **$299.95**

KANTRONICS Software

▶HOSTMASTER™ Multi-mode Terminal Software. Easy-to use menu-driven programs designed to complement Kantronics TNCs. Use Hostmaster II+ for IBM-PC and compatibles or HOSTMASTER Mac for the Macintosh..... **$69.95**

▶SuperFax II Multi-mode Terminal Software. For Kantronics KAM or KPC series, ideal for WEFAX reception..... **$49.95**

KANTRONICS G-TOR™ Book

▶G-TOR™ The New Mode A valuable collection of previously-published articles, a detailed description of the G-TOR protocol and informational numerous charts. Written primary by Kantronics staff Phil Anderson, WØXI, Karl Medcalf, WK5M and others. 90 pages, soft cover..... **$19.95**

MFJ

▶**MFJ-1278B** Multi-mode Data Controller (left/bot.) Ten modes: PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex and Memory Keyer. Enhanced Mailbox, 32K System RAM, 16-gray level modem, 20 LED tuning indicator, Automatic Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 user programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED indicator, KISS interface, Host mode, Threshold control, RS-232 and TTL ports. Fast start manual. 12 VDC, AC adapter included. 9½" x 9½" x 1½" ... **$269.95**

▶**MFJ-1278BT Turbo** (left (top) Same as MFJ-1278B above except Turbo version, includes a 2400 baud modem **$339.95**

▶**MFJ-1278B/DSP** Same as MFJ-1278B w/DSP filter.....**$349.95**

▶**MFJ-1270C** TAPR TNC-2 Clone Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX reception. KISS interface for TCP/IP, 256K EPROM and 32K RAM. TTL serial port, battery memory back-up. AX.25/Level 2-version 2 software, hardware HDLC for full duplex, true data carrier detect for HF, multiple connects. Transceiver interface cable (less connector), TTL serial port connector and AC adapter supplied. 12 VDC. 9½" x 7½" x 1½" . **109.95**

▶**MFJ-1270CQ** TAPR TNC-2 Clone 9600 baud TNC **$199.95**

▶**MFJ-1276** TAPR TNC-2 Clone (right) Same as 1270C but with PACTOR and 20 LED tuning indicator **$149.95**

▶**MFJ Starter Pack** • Computer interfacing cable, terminal software and instructions. Order MFJ-1282B Multi-Com disk or MFJ-1283 tape for C64/128/VIC-20. MFJ-1284 for IBM or compatibles or MFJ-1287 for Macintosh..... **See Price List**

▶**MFJ-1289** Multicom Program for MFJ-1278B • Supports color SSTV, 16-level FAX, packet picture. Menu driven, bursting with features - one key micro, call alert, auto router, auto parameters setting to TNC, text editor, 32K receiver buffer, and more! Complete with cable. (IBM 5-1/4") **$59.95**

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DSP-1232 $699.95

The top of the line. These state-of-the-art controllers use digital signal processing (DSP) technology with the Motorola 56001 processor. Two Digital signal processors are built into the DSP-2232 for the ultimate in dual simultaneous ports. Full MailDrop facilities for packet, PACTOR & AMTOR Built-in software modems include all PK-232 modems, all satellite modems (400, 1200, 4800 and 9600 eq bps for PACSAT and OSCAR), 9600 bps K9NG/G3RUH, Analog FAX HF and APT, Analog SSTV, 2400 bps DPSK and much more! Dual Simultaneous ports let you gateway from packet to AMTOR, packet to PACTOR, and packet to packet. A multi-purpose LCD display keeps you on top of all activity. PACTOR, Gateway, up/down Doppler shift for PSK modems, and up/down frequency stepping to control the radio's frequency have been added. Cables and connectors included. 12V DC required. Single port on DSP-1232 and no LCD (fully upgradeable to DSP-2232). 12V DC. 12"w x 9⅞"d x 2⅞"h, 3¾ lbs.

Dual Simultaneous Ports

PK-900

$469.95

The best non-DSP multi-mode controller now comes standard with GPS capability. Remote GPS command programming, stand alone tracking, remote polling, and many other GPS features are included!. The firmware is compatible with GPS, Loran, ARNAV, and Ultimeter®. The PK-900 has all the modes and features as the PK-232, plus much more! Features dual simultaneous ports-true Gateway from packet to AMTOR, packet to PACTOR, and packet to packet, even Gateway as a node for node operation. Allows VHF Packet users connecting to Port 2 to monitor and link to other AMTOR, PACTOR and even packet stations using an HF radio on Port 1. Full MailDrop facilities with 18K mailbox for packet, PACTOR and AMTOR. Superior HF filtering and true DCD state machine. Memory ARQ. Large, easy to read LCD panel keeps you informed of all activity. 9600 bps modem upgrade available. HF WeFax reception software available — AEA FAX III 900. External AFSK pots for both ports. Cables and connectors included. 12 VDC required. 12V DC. 11⅞"w x 12"d x 3½ "h, 6¼ lbs.

Dual Radio Ports

PK-232MBX

Call for Price!

The highly popular PK-232MBX now comes standard with GPS firmware which allows for remote GPS command programming, remote polling, stand alone tracking, plus much more! WB4APR's APRS™ compatible on HF or VHF packet. Compatible with GPS, Loran, ARNAV and Ultimeter II® weather stations. PK-232MBX modes include Packet (45 to 1200 bps and optional 2400 bps), AMTOR/SITOR, PACTOR, Baudot, ASCII RTTY, ARQ and FEC, Morse Code, WeFax, and Gateway. It receives NAVTEX/AMTEX and TDM. It has two switchable radio ports. DCD threshold control on front panel. Node operation with Gateway. Superior filter design provides superior HF performance. Built-in 18K personal mailbox provides MailDrop facilities for packet, PACTOR and AMTOR. SIAM for automatic RTTY signal detection, KISS mode for TCP/IP compatibility. Hardware HDLC. External AFSK adjustment, scope out and CW key out jack. Cables included. 12 VDC. 11"w x 8¼"d x 2½"h. 3 lbs.

Packet Data Controllers

PK-96 9600 & 1200 bps Packet TNC

32K RAM (18K Mailbox): **$199.95**

128K RAM (100K Mailbox): **$249.95**

The PK-96, 9600/1200 bps packet TNC has 1200 bps AFSK tone signaling and 9600 bps K9NG and G3RUH compatible direct frequency modulation. New GPS firmware lets you transmit/receive position information with Bob Bruninga's APRS™ software included. The new GPS firmware allows for remote programming of GPS commands, remote polling and initializes GPS receiver upon power-up. Can be used as a stand alone tracking device! GPS, Loran ARNAV, and Ultimeter II® compatible. True DCD state machine, hardware HDLC, modem disconnect header, Gateway firmware, node operation. Identifies TCP/IP, NET/ROM, and The Net stations. The Net X1J3 option available so the PK-96 can be a 1200 or 9600 bps component in a The Net system. Comes standard with 32K RAM (18K Mailbox), expandable to 128K RAM (100K). Full MailDrop facilities. The PK-96 includes an EXPERT disable command for beginners. Comes standard with APRS™ software and PC PakRatt Lite™ software. External; TX pots for both 1200 and 9600 bps, ext. RX audio. 12V DC. 6¼ "w x 7½"d x 1⅜"h, 1¼ lbs.

PK-12 1200 bps Packet TNC

32K RAM (15K Mailbox): **$119.95**

The PK-12 is **AEA's low cost, 1200 bps, VHF/UHF, packet TNC.** Global Positioning System firmware lets you transmit and receive position information with Bob Bruning's APRS™ software included. The new GPS firmware allows for remote programming of GPS commands, remote polling, and initializes the GPS receiver upon power-up. This TNC can parse the GPS information itself so it can be used as a stand alone tracking device! The GPS firmware is GPS, Loran, ARNAV, and Ultimeter II® compatible. Gateway firmware lets the PK-12 work as a node for faster throughput. The PK-12 comes standard with 32K RAM (15K Mailbox) and is easily expandable to 128K RAM (100K). The PK-12 includes an EXPERT disable command for beginners, and commands that let you choose who connects and digipeats throught the TNC. Identifies TCP/IP, NetROM, and The Net stations. Comes standard with PC PakRatt Llite™ a packet-only, DOS control program. Perfect for base station use and full of features for mobile use it's small, it's light, it can run on a 9-volt battery, and it has GPS commands – the ultimate mobile feature. 12V DC. 5¾"w x 5¼"d x 1⅜"h, 12 oz.

Packet Software Included

PC PakRatt Lite and Automatic Packet Reporting System (APRS) software are included with purchase of the AEA PK-96 and PK-12.

PC PakRatt Lite is a Packet-only, DOS control program for the PK-96 and PK-12. Features include: on-screen, one-touch Help menu, full QSO logging, 900 line scroll-back buffer, complete macro facility. There are even five message/command buffers for pre-programming messages or commands for transmission with a single keystroke.

APRS software was developed by Bob Bruniga (WB4APR) for real time packet communications. This program contains a map of the world which can be scaled from .5 to 2000 miles. Use this program to map and track other APRS users whether they are mobile or base. Each station is given a symbol such as a car, boat, or house. You can even create maps of your own city by driving down the streets.

AEA's APRS Adapter Cable

Do you have enough COM ports for GPS applications? This handy cable allows any **AEA TNC** and **GPS receiver** to connect to just one computer COM port on your computer running APRS software. This is a great piece of equipment because having free COM ports is a luxury to most computer users. Lap top computers only have one COM port, so the adapter cable is a must for convenience..... **$30.00**

Call AEA's Upgrade Hotline at (206) 774-1722 to upgrade earier models

Kantronics

THE ULTIMATE DATA CONNECTION

KAM Plus™
HF and VHF Dual Port
Multi-Mode Controller

The definitive multi-mode TNC, the KAM Plus features an HF port and a VHF port, so it easily operates any HF mode and VHF packet at the same time. Operates G-TOR™, PACTOR, AMTOR, PACKET, RTTY, CW, ASCII, and NAVTEX/AMTEX and offers G-TOR monitoring without additional monitoring software. The KAM Plus supports GPS operations and is APRS compatible. Equipped with 128K RAM, configure your KAM Plus mailbox space to more than 100K. The battery-backed RAM saves all parameters and mailbox messages. The KAM Plus uses standard shifts and is programmable for any shift. Operates RS-232 or TTL. Can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 9-15 Vdc @ <260 mA. 1-3/4"h x 6"w x 9"d. 2-1/2 lb.

KPC-9612™
9600 and 1200 Baud
Dual Port Packet Communicator

The leader among dual-port, dual-speed TNCs, the KPC-9612 can operate at both 9600 and 1200 baud at the same time. The 9600 baud port can even be configured for 19,200 baud. The KPC-9612 supports GPS operations and is APRS compatible. And with Kantronics' new K-Net networking option, the KPC-9612 can operate as both a networking node and a TNC at the same time. Choose a 32K or 128K RAM version, and configure your full-featured PBBS to more than 100K of mailbox space. Battery-backed RAM saves all parameters and mailbox messages. Can run on a 9-volt battery, can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 6-25 Vdc @ <45 mA. 3/4"h x 6-1/4"w x 6-1/4"d. 13 oz.

KPC-3™
1200 Baud
Packet Communicator

The hottest TNC on the market, the KPC-3 is the perfect 1200 baud packet TNC. Choose a 32K or 128K RAM version, and configure your full-featured PBBS to more than 100K of mailbox space. Battery-backed RAM saves all parameters and mailbox messages. Kantronics provides the most flexible GPS operations available in a TNC, and the KPC-3 is APRS compatible. With Kantronics' new K-Net networking option, the KPC-3 can operate as a networking node and a TNC at the same time. Can run on a 9-volt battery, can be accessed and controlled remotely, features on-line help messages for each command, and comes with software to help you get started. Very low power required: 6-25 Vdc @ <40 mA. 3/4"h x 5-1/4"w x 5-1/4"d. 11 oz.

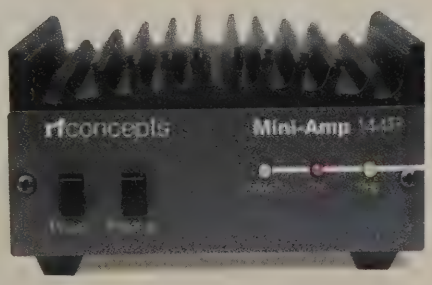
ENJOY THE BEST

Mini-Amp 144

2m and 70cm HT amps

For the 2 meter and 70 cm bands, rfconcepts' new Mini-Amp™ 144 and Mini-Amp 440 are perfect for hand-held radios. Both amplifiers are available with preamps producing 10 to 15 dB gain, and both will accept 1 to 6 watts in. They are very small and lightweight and can easily be equipped with mounting brackets, so they are ideal for portable use.

Model #	144	144P	440	440P
Power In:	2W/3W		3W	
Power Out:	20W/30W		20W	
Max. Input:	6W			
Gain (typical):	–	15dB	–	10dB
Current:	5A			
Size (inches):	4 x 2 x 6			
Size (cm):	10.2 x 5.1 x 15.2			

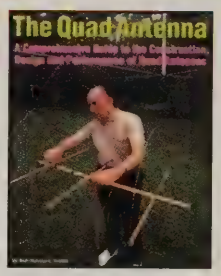


Mini-Amp 144P with preamp

rfconcepts™
a division of Kantronics Co., Inc.

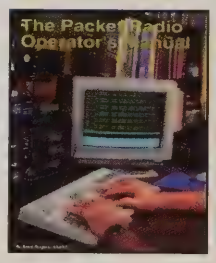
CQ Books and Videos

The Quad Antenna



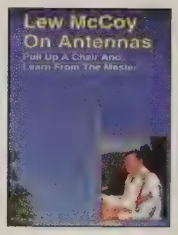
Hams love antenna books and this book is no exception. Written by world renowned author Bob Haviland, W4MB, The Quad Antenna is the authoritative technical book on the design, construction, characteristics and applications of Quad Antennas. Discover how to easily build a quad antenna for your station that will help you fill your logbook with rare DX that you have only dreamed about before. **$15.95**

The Packet Radio Operator's Manual



This book is written by CQ columnist and Amateur Radio Packet authority Buck Rogers, K4ABT. An all new introduction and guide to packet operation, it is the perfect single source, whether you're an advanced user or just starting out. Learn about packet radio without all the technical jargon. Also included are detailed hookups for dozens of radio/packet controller/computer combinations, making this book the definitive resource for the active packet user. **$15.95**

McCoy on Antennas



CQ magazine author and acclaimed authority on antenna theory and design, Lew McCoy, W1ICP, has written a truly unique antenna book that's a must for every amateur. Unlike many technical publications, Lew presents his invaluable information in a casual, non-intimidating way. It's not just an antenna handbook, but a wealth of practical antenna advice for the ham! **$15.95**

The Vertical Antenna Handbook

Take advantage of the 20 years of research and practical experience of naval communications engineer Capt. Paul H. Lee, USN(ret), N6PL. Learn the basic theory, design, and practice of the vertical antenna. Discover easy construction projects such as a four-band DX vertical or a broadband array for 80 meters. Ever wonder how to build a functional directive vertical system? Paul Lee can get you started today! **$9.95**

1996 CQ Amateur Radio Almanac, 3rd Edition

If you're looking for information about ham radio, it's in the *1996 Amateur Radio Almanac*. This Sourcebook is filled with over 500 pages of facts, tables, graphs, and maps, in an easy-to-read format. Here's just a sample of what's in this edition: Amateur Radio Around the World, Expanded Coverage of Inter-net Computer Services for Hams, New General Class License Question Pool, and Amateur Radio Club Listings. The list goes on! **$19.95**

Get Started with CQ's Video Library!

Getting Started in Contesting

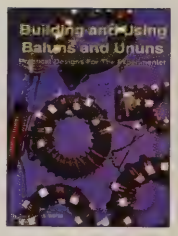
For the newcomer to contesting or an experienced veteran, this video is for you! You'll get advice and operating tips from some of contesting's most successful competitors. Here's just a sample of what you'll see: what contesting's all about, tips for beginners, how to compete from a small station, operating secrets from the "pros", live QSOs from world class stations, VHF/UHF contesting. **$19.95**

Getting Started in VHF

This is the ideal introduction to operating on VHF. See demonstrations of the latest radios. Also, learn about re-peater usage as well as the more exotic VHF operating modes. Whether you are interested in packet radio, satellite operation, or using your local repeater, this is your video!

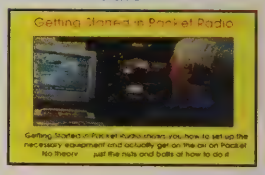
$19.95

Building and Using Baluns and Ununs



Written by world-renowned expert Jerry Sevick, W2FMI, this volume is the definitive source for his latest practical information and designs on transmission line transformer theory. W2FMI has unraveled the technological mysteries with designs that are simple and work. Discover new applications for dipoles, yagis, log periodics, beverages, antenna tuners, and countless other examples. **$19.95**

Getting Started in Packet Radio



This video will help de-mystify the fascinating but sometimes confusing world of packet radio. Learn how to get started using your computer on the radio. Included are step-by-step instructions on making packet contacts and using packet bulletin boards, networks and satellites. **$19.95**

Getting Started in Amateur Satellites

Learn how veteran operators set up their satellite stations. Learn how to locate and track ham satellites with ease. Watch operators access sa-tellites and contact far ranging countries around the world. This video is filled with easy to understand advice and tips. **$19.95**

The NEW Shortwave Propagation Handbook

CQ has been a leader for nearly 50 years in providing timely and invaluable information on HF propagation. Thousands of radio amateurs were helped by our first propagation handbook. Now, you can take advantage of the information and techniques presented in this completely updated and revised volume. It's certain to be one of ham radio's classics—and one that will immediately increase your enjoyment of the HF spectrum.

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CQ 1996-97 Calendars

$9.95 ea.

Imagine professional color photographs of some of the biggest stations in the world. You'll see everything from views down the boom of an 80 meter beam to a station with over 12 towers! No ham should be without **CQ's 1996 Amateur Radio Calendar.**

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DAVIS Computerized Weather Stations

Gives Wind, Temperature, Rain and Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC – remote with Modem Interface. Central Junction Box for Easy Hook-up, Modular Design. Perfect for NOAA Weather Monitoring Stations.

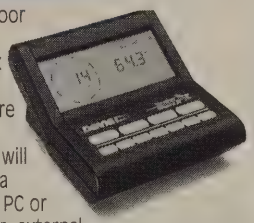
▶Model 7440 Weather Monitor II – $349.95

Top-of- the- line Personal Weather Station that combines all weather monitoring functions and a 12 or 24 hour clock with date, into one package and shows them on an easy-to read, back lit, 1⅞" x 4⅜" LCD display. **Temperature:** Indoor, from 32°F to 140°F **Wind:** Wind Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • Wind Chill to –134°F • Low Wind Chill **Barometer**: Barometric Pressure (with memory recall) • Trend arrow **Humidity:** Inside Humidity 0% to 95% (outside optional) • High and Low Humidity **Alarms:** Temperature, Wind Speed, Wind Chill, Humidity, and Time. Barometric trend alarm for change >02, .04, or .06 inches of mercury in an hour **Other Features:** Compact, just 5¼" x 5⅞" x 3" • Scans selected functions • Metric or U.S units • AC operation with battery back-up • use on desk, shelf or wall.

External Temperature/Humidity Sensor Allows the 7440 Weather Station to measure outside humidity, dew point and temperature. Comes with 40 ft. cable.... Model 7859 **$109.95**

Rain Collector II Allows the 7440 Weather Station to read both daily and accumulated rainfall in 0.1" increments. Comes with 40 ft. interconnecting cable ..... Model 7852 **$69.95**

▶Model 7425 Weather Wizard III – $169.95



Monitor both Indoor and Outdoor weather conditions at the touch of a button on the 1⅞" x 4⅜" LCD display. With the optional Rain Collector, measure daily and accumulated rainfall. Optional Weatherlink software will process and store weather data through and IBM® compatible PC or Macintosh®. With anemometer, external temperature sensor, junction box, cables and AC adapter. **Temperature:** Indoor, 32°F to 140°F • Outdoor, –50° F to 140° • High and Low Temperature **Wind:** Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • Wind Chill to –134°F • Low Wind Chill **Alarms:** Temperature • Wind Speed • Wind Chill • Time. **Other Features:** Compact, just 5¼" x 5⅞" x 3" • Scans selected functions • Metric or U.S units • AC operation with back-up • Desk, shelf or wall mt.

▶Model 7415 Weather Wizard IIS™ – $129.95

All of the features of the Weather Wizard III, except it does not indicate Wind Direction, and the LCD display is smaller.

Rain Collector II Allows the 7420 and 7415 to read both daily and accumulated rainfall in 0.1" increments. Comes with 40 ft. interconnecting cable..... Model 7852 **$69.95**

▶Model 7400 Perception II – $129.95

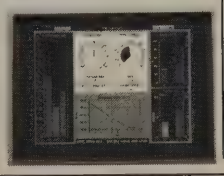
Monitors indoor climate, looks similar to Weather Wizard III. **Functions:** Temperature 32°F to 140°F • High/Low Temperature Barometric Pressure w/Memory Recall • Humidity • Highs and Lows recorded with time and date • Alarms for temperature, humidity and time • Barometric alarm for change >.02, .04, or .06 inches of mercury/hour • 12 or 24 hour clock with date • Back lit display

40 ft. Extension Cables

▶ 4-conductor, use with the anemometer, external temperature sensor, rain Collector, or weatherlink. Model 7876 **$18.00**

▶ 6-conductor, for use with the external temperature and humidity Sensors, only.....Model 7878 **$22.00**

▶ WEATHERLINK® Software



Link Perception, Weather Wizard, or Weather Monitor to an IBM® compatible or Macintosh. Create graphs, calculate average conditions, generate summaries, analyze trends, more.

See DAVIS in the Price List

NEW WAVE Antenna

PORTAPLE Collapsible Masts

For portable or temporary antenna installations!

These telescoping 7-section, 6063-T832 polished aircraft aluminum masts taper from 2" to 1¼" and are easily raised by one person at ground level in seconds. Each section joint has a 4" overlap and snaps into place. Rotates at any section along its length, or locks.

▶Adventurer
47" to 12 feet.....**$109.95**

▶Traveler
59" to 19 feet....**$124.95**

▶Rover
71" to 26 feet....**$149.95**

▶Expeditioner
83" to 33 feet....**$174.95**

▶Explorer
95" to 40 feet....**$199.95**

▶Big Foot Park-on steel mount for supporting portable masts. Primed, ready to paint. 8¾ lbs **$119.95**

Order from Milwaukee only

TUNE BELT Handheld RadioBelt

With this unique belt you get an integrated pouch and belt for less than the cost of most carrying cases. Strap it on! – it's comfortable, convenient and protective; and is available in two sizes to fit virtually any handheld.

- ▶ **HH-1PS** Radio belt for up to 5" HT **$19.95**
- ▶ **HH-1PM** Radio belt for up to 6" HT **19.95**
- ▶ **HH-1PL** Radio belt for up to 7" HT..... **19.95**
- ▶ **HH-2PM** Radio belt for up to 6" HT, w/batt pocket **21.95**
- ▶ **HH-2PL** Radio belt for up to 8" HT, w/batt pocket..**21.95**

ARRL Repeater Directory

Includes more than 20,000 listings for voice and digital repeaters and propagation beacons located in North, Central and South America. Lists more than 500 beacons from 14 to 24 GHz, band plans, tone chart, committees, clubs and more! Pocket sized... ARR270 **$7.00**

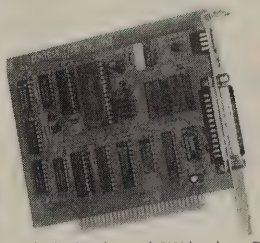
MAGELLAN

WE BRING GPS DOWN TO EARTH.™

MERIDIAN XL GPS Receiver For navigation, hunting, etc. Tells you where your are, and how to get back. Interfaces with GPS capable TNCs. for APRS packet operation. Check location of transmitter sites, repeaters and get data for satellite and moonbounce work– calculates the phase of the mon, and sunrise/sunset for anywhere on earth! Extensive graphic screens, including a full-function trackplotter, and navigation screens with solid, easy-to-read characters.

• Large, backlit graphic LCD display with helpful icons to to help you navigate simply and accurately • Menu driven interface prompts next key press • Tracks up to 12 satellites for continuous 1 second position updates • Shows present position in Lat-long or UTM coordinates • GO TO and MOB functions make it easy to enter a single waypoint, or retrace your steps • Storage for up to 200 named waypoints, and 5 reversible routes of 15 legs with six character labels for easy identification • Backtrack option saves last 15 fixes and creates a route from the starting point • An NMEA data port to drive autopilots or share information with other electronics including GPS capable TNCs • Rugged, waterproof construction and armored case • 6 hours of operation on 3 AA batteries.• Carrying case with belt loop, lanyard, reference manual and user guide 6⅛"h x 3½"w x 1¼"d **$299.95**

UNIFIED Microsystems



W9XT Contest Card for IBM™ PC and Compatible

▶This 5" x 4½" plug-in card occupies a single 8-bit PC slot, does voice recording and playback, and CW keying. Enough memory to store a full 16 seconds of voice which can be partitioned between 4 messages of different lengths for playback on command. The microphone input is sampled at an 8-kHz rate resulting in audio that high quality and natural sounding. The card is non-volatile and does not use any disk space. On CW, the card frees up the PC port, and uses a relay which allows operation with positive or negative-keying. Works with all rigs and is compatible with popular logging programs. Low emmission, FCC Class-B certified..... **$139.95**

AES® IBM™ – Compatible PC

INTEL PENTIUM 90

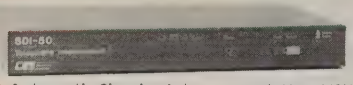
- ✔ A True Plug and Play Computing Solution
- ✔ Slim, perfect for dedicated Packet Service
- ✔ Desktop for the user who wants more ... the all around computing solution!
- ✔ Highest Quality, Maximum Performance
- ✔ FCC Class-B Certified
- ✔ Two year Warranty on all components, No Extra Charge
- ✔ American made parts used whenever possible.
- ✔ Assembled in the U.S.A.

Model AES PENTIUM 90 • Call for Price

- Desktop Case – 5 Drive Bays
- Intel 90MHz Pentium CPU
- 8Mb RAM
- 1 Mb PCI Video Card
- Quad-speed CD ROM Drive
- 1.2Gb Conner Hard Disk
- 3.5" (1.44 Mb) High Density Mitsumi Floppy Drive
- 14" .28 SVGA Non-interlaced Monitor
- 101 Key Keyboard
- 3-button Opti/Mech Mouse
- MS DOS 6.22 System
- Windows 3.11
- CPU Fan

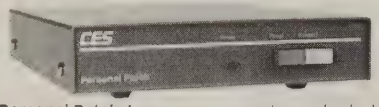
The Two Year Parts & Labor Limited Warranty is handled by:
ASC COMPUTERS of West Allis, WI

CES Telephone Interconnects



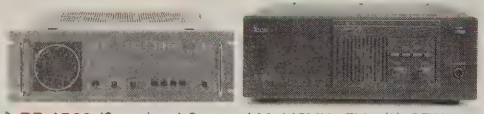
▶**SDI-50** Automatic Simplex Interconnect Uses VOX-enhanced sampling, gives telephone phone access to handhelds and mobiles. Remotely programmable from any touch phone. Allows telephone-to-mobile signaling for selective calling. Automatic CW ID. Converts base stations to a remote station accessible from any telephone. AC adapter and cables are included. 14⅛"w x 8¾"d x 11 3/16"h, 3¾ lbs **$399.95**

▶**SSI-68** Simplex Interconnect For mobile applications, controlled by DTMF audio from mobile or telephone. Interface and software allows for operation with a wide variety of radio and telephone systems. VOX-enhanced sampling for optimum performance. Comes with telephone cable, computer interface and AC adapter. 8⅞"w x 6⅛"d x 1¼"h, 2½ lbs..... **$269.95**



▶**410** Personal Patch An economy, easy to use basic interconnect. Does not have all of the user programmable features found in the higher priced CES telephone interconnects. 10-16V DC. 8⅞"w x 6⅛"d x 1¼"h, 2½ lbs **$169.95**

ICOM FM Repeaters



▶**RP-1520** (2-meters) Covers 144-148MHz FM with 25W output. Fully synthesized – no retuning after changing frequency. Features: User programmable call sign ID; Hang-up and time out timers; Manual transmit; DTMF decoder for remote control operation; Local inhibit function and CTCSS encoder; Excellent IMD attenuation. Sensitivity: <0.5uV for 12 dB SINAD. Built-in speaker and microphone connector. 117V AC or 13.8V DC. 16¾"w x 5⅞"h x 14½"d, 37½ lbs ..... **CALL**

▶**RP-2210** (220 MHz) Features are similar to RP-1520 shown above. Covers 220 to 225 MHz in 5 kHz tuning step increments with 25W output. CTCSS and hang-up timer are dip-switch programmable. EPROM programming for ID..... **CALL**

▶**RP-4020/50W** (440 MHz) (right) Similar to RP-1520/2210 except for different appearance. Covers 430 to 450 MHz with 50W output. The DTMF code includes a 4-digit password to prevent undesired remote control access ..... **CALL**

▶**RP-1220** (1.2 GHz) Similar to ICOM repeaters above. Synthesized, covers 1240 to 1300 MHz with 10W (high) or 1W (low) output. Battery back-up connector. Most functions can be remotely controlled using DTMF codes ..... **CALL**

YAESU FM Repeaters

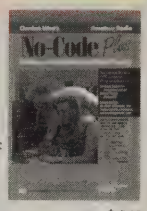
VHF 135-175MHz
UHF 400-512MHz
Call for Prices

Features...

- 25 Watt Continuous Duty Power
- 8 Channels • PLL Synthesized
- 110/220 VAC or 13.8 VDC @ 6A
- CTCSS Encode/Decode included
- Repeater/Base Sta. Operation
- Fully Programmable Functions including Hang-Up Time and Time-out Timer • Options
- Wall Mountable or fits in a Standard 19 inch Rack
- DB-25 Connector for Accessory and 8-PIN Modular Jack for Telephone Line.
- Modular Card Style Unit Construction • E-Z Open Cabinet
- 14¾" x 10¾" x 4⅜", 25½ lbs

"Hi! ... I'm Paul, W9KHO at Milwaukee... Call, let's talk Repeaters!
1-800-558-0411

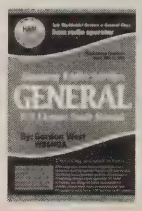
W5YI Group, Inc



▶**NO CODE PLUS TECHNICIAN STUDY GUIDE** By Gordon West, WB6NOA Are you anxious to get on the air? Here's everything you need to become a licensed ham – quick and easy without passing a Morse code test! New 2nd edition, by Gordon West, covers the newest exam questions of July 1, 1993 to 1997. Fully illustrated 236-page textbook includes all possible questions, multiple choices and answers. ..... GWNC **$9.95**

OTHER TEST STUDY MANUALS
By Gordon West, WB6NOA

▶General Class Study Manual ..... GWGM **$9.95**
▶Advanced Class Study Manual . GWAM **$11.95**
▶Extra Class Study Manual ..... GWEM **$9.95**



VIDEO

▶**HAM CLASS** by Gordon West, WB6NOA Covers everything from antennas and feedlines to rules and regulations. Ideal for instructors and students and full of information everyone can use. 52 minutes.
GWHC **$19.95**

TAPES

▶**THEORY TAPES** by Gordon West, WB6NOA General Written Theory – 2 tape set .....GWGW **$9.95**
Novice Written Theory – 2 tape set.....GWNW **$9.95**
TECH Written Theory – 2 tape set .....GWTW **$9.95**

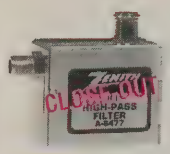
▶**MORSE CODE TEST PREPARATION**
Code Teacher 0-5 WPM .....GWNT **$9.95**
General Class Code, 3-15 WPM .....GWGT **$9.95**
Extra Class Code, 12-21 WPM ..... GWET **$9.95**

SEQUOIA Publishing

▶**Pocket REF** 460 pages, packed full of information for nearly every hobby. Chapters on air and gas, carpentry, chemistry, computers, electricity, math, hardware, plumbing, steel and materials surveying, welding and more. 100's of tables and charts, 3200 conversion factors..... **$9.95**

▶**Pocket PCREF** 320 pages, a comprehensive PC computer reference. ASCII Codes; Numeric Prefixes; Video Standards; Decimal/Hex Conversions; Printer Codes; PC Error Codes; I/O Interface Pinouts; PC Memory Maps; Address Maps; Modem Commands & Switch Settings; Keyboard Scan Codes; Floppy Drive Types; CPU Types; DOS History and more. **$14.95**

High Pass Filter Bargain!



▶**ZENITH A-8477** Interference protection from 6–160 meter transmitters. More than 45dB attenuation at 52MHz and lower. For 75Ω coaxial systems, has type-F connectors. 2 x 1¾" x 1" **$9.95**

See p.19

RAMSEY Electronic & Amateur Radio Kits

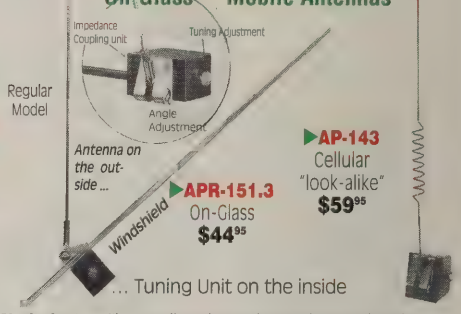
Whether you are a novice kit builder who is learning to solder for the first time or an experienced and crafty HAM looking for the "latest and greatest" – Ramsey provides plenty of projects to keep you busy.

Cobra® CORDLESS TELEPHONES

▶**CP-706** (left) Cobra INTENNA® A 46/49MHz cordless phone with built-in base and handset antennas for extra convenience, 10 Channel Scanning for quality & performance and Automatic Voice Scrambling to provide complete calling privacy, prevents eavesdropping. Compander Noise Reduction; Page/Find Button; Battery Saver; Last Number Redial; Flash Button; Digital Security Codes; Tone/Pulse Dialing; Hearing Aid Compatible. Ivory color, 9⅛"l x 5"w x 3½"d, 1 lb **$89.95**

▶**CP-912** (right) A 900MHz Digital Spread Spectrum cordless phone. Provides substantially Longer Range and Exceptional Clarity over 46/49MHz models. Privacy and No Interference is realized by digitally encoding and randomly spreading conversations over 100 channels in the 900MHz range. Page/Find Button; Last Number Redial; One-Touch Emergency Dial; Battery Saver; Tone/Pulse Dialing; Receiver Volume; Hearing Aid Compatible. 9"l x 6"w x 4¼"d, 2½ lb**$269.95**

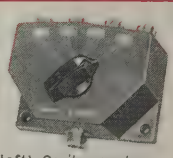
Antenna Specialists "On-Glass™" Mobile Antennas



No holes! ... The small tuning unit attaches to the glass inside the vehicle, and couples capacitively thru-the-glass to the radiating element mounted on the outside. Installs with DUOBOND™ adhesive that is easily removed without damage. Includes adhesive, 15 ft. of coax and PL-259 connector

Power	100 watts	**Radiator**	Electrical 1/2-wave
Frequency Range	144-174 MHz (APR-151.3I) 138-150 MHz (AP-143	**Coupling Unit**	shunt fed, dc gnd
		Whip Material	Stainless steel, black DURA-COAT ™ finish
Bandwidth	6 MHz tunable	**Whip Length**	33 in. (APR-151.3) 23 in. (AP-143)
VSWR	Less than 1.5:1		
Impedance	50Ω nominal	**Cable**	RG-58/U, 15 ft. with PL-259

DAIWA Coaxial Switches



▶**CS-201** Two position Coax Switch (left) Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 600MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, the unused terminal is always grounded for protection.....**$29.95**

▶**CS-401** Four position Coax Switch (right) Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 800MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminals are always grounded. **$119.95**

RF Products

Improve mobile HT performance! Get the RF outside of the vehicle. Simply attach the rubber duck antenna from your HT to this handy magnetic mount and place it outside, on the roof or trunk, where it can radiate without obstruction.

▶**199-416** accepts BNC connector, with 10 ft. coax and BNC..... **$17.95**

STANDARD Handhelds • Mobiles

▶C-168A 2 Meter Handheld • Very small! Covers 144–147.995 MHz transmit and 115–175 MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40-memory channels (optional 200 channel memory unit plugs-in). 7 types and 3 modes of scanning. Output: 2.5W output with included 700 mAh, 7.2V battery; 5W at 12V. CTCSS encode and decode , DTMF squelch with page. 4.9"h x 1.8"w x 1.2"d, 10 oz.

▶C-468A Same as **C-168A** described above, but covers 438-449.995MHz transmit and 400–470MHz receive.

CALL for Prices...

▶C-188A 2 Meter Thin Handheld Small – fits in shirt pocket, slide-cover protects keyboard. Covers 144-147.995MHz and 115-175MHz receive including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40 memory channels (optional extra 40 or 200 memory units plug-in). Ten 15-digit autodial memories. Output: 2.5W with included 700 mAh 6V battery; 5W at 9.6V. 7 types and 3 modes of scanning. CTCSS encode and decode. 5.8"h x 2.3"w x 1.0"d, 10 oz.

▶C-288A Same as **C-188A** but covers 220-225 MHz transmit and 115-249 MHz (Standard's Super-Extended receive). **CALL for Prices...**

▶C-528A Deluxe Twin Band Handheld 2 Meters and 440MHz .Covers 144-147.995 & 438–449.995MHz transmit, 130–170 & 400-470MHz receive. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. 40 memory channels (20+20) + 2 call + 2 vfo. Output 2.8W (2M), 2.5W (440MHz) with the supplied 700 mAh, 7.2V battery and 5W with a 12VDC source. Five scan modes per band. CTCSS encode and decode included. DTMF squelch and page. New flex design antenna. 6¼"h x 2¼"w x 1¼"d, 17 oz

▶C-228A Same as **C-528A** but 2m/220 MHz–covers 144–147.955 & 220–224.995 transmit and 130–174 & 220–245 MHz receive. Output: 2.5W on both bands.

▶C-628A Same as **C-528A** but 440MHz/1.2 GHz. Covers 438–449.995 tx, 400–470MHz rx and 1240–1300MHz transmit and receive. Output: 2.5W (440MHz), 1W (1.2GHz).

***▶New!* C-568A** Covers 2M/440MHz/1.2GHz tx , receive ranges: 110-199.995, 310-399.995, 345-399.995, 400-485, 800-975.995 (cell blocked) and 1200-1299.990 MHz. AM programmable and auto detect for VHF aircraft band. 40 memories, CTCSS encode/decode, paging, DTMF squelch, battery saver, auto power-off. 2.5W output (35mW on 1.2GHz) with standard battery. 5¼"h x 1¾"w x 1⅜"d , 13 ¾ oz.

▶C-558A Deluxe Super Compact Twin Band Handheld Covers 2 meters and 440MHz. Ranges: 144-147.995 and 438–449.995MHz transmit, 115–170 and 400-470MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. 40 memory channels; optional extra 40 or 200 plug-in memory units available. Ten 15-digit autodial memories. Output: 2.8W (2M), 2.5W (440MHz) with supplied 700 mAh, 7.2V battery or 5W at 12VDC. Five scan modes; 3 types on each band. CTCSS encode and decode included. 5⅛"h x 2¼"w x 1¼"d, 12.5 oz..... **CALL**

▶C-108A 2 Meter Handheld TINIEST HANDHELD EVER! Fits in your shirt pocket! 200mW output – plenty for hamfests, picnics, conventions, or working nearby repeaters. Extended receive: 100–175MHz including AM aircraft band. 20 memories, CTCSS encode built-in (23 tones). Four scan modes Powered by just two AA's 3¼"h x 2⅜"h x 1"d, 5 oz ..... **CALL**

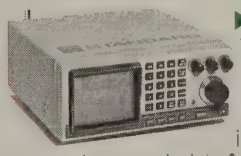
▶C-508A Dual Band Handheld "TINIEST HANDHELD EVER" Fits in your shirt pocket! 280mW output on both bands plenty for hamfests, picnics, conventions, or working nearby repeaters. Use it with your mobile rig in cross-band repeat - able to store both VHF and UHF in one memory. RX coverage: 100-180MHz, 340-400 & 400-480 MHz. TX Ham bands. 60 memories + VFO + CAll. CTCSS encode/decode. Scan: Busy, Pause or Hold. Operates from 3V (2 "AA" batteries). 2¼"w x 3⅜"l x 0.98"d....**CALL**

▶C-178A Dual Band Handheld Up to 5W on 2M and 50mW on 440MHz. Covers 144-148MHz and 438–450MHz transmit. Extended receive: 110–174 and 320–475MHz, including AM aircraft band. Modifiable for MARS/CAP transmit*. 40 memory snap-in chip with optional extra 40 or 200 memory chips available. CTCSS encode and decode. Seven scanning modes, including CTCSS scan. 2W/2m with supplied 700mAH, 7.2V battery, 5W/2M at 12V. 4⅞"h x 2¼"w x 1¼ "d, 13 oz..... **CALL**

See the Price list for optional accessories for these STANDARD Radios.

▶C-1208DA 2 Meter Mobile 50W of power totally controlled from the microphone! Remote the radio anywhere: the microphone has a large LCD display, all controls, and speaker. Extended receive 100-200 and 250-520MHz including (AM) aircraft band. 100 memories. CTCSS encode and decode built-in. 10 DTMF autodial memories of 15 digits each. Plug-in ready without modification for high-speed 9600 baud packet (or 1200/2400). Six scan modes, including priority and CTCSS. Modifiable for MARS/CAP TX *. 5½"w x 5¾"d, 1.7 lbs.....**CALL**

▶C-5718DA Twin Band Mobile • 2M/440MHz with 110-199 and 250-499 MHz receive including (AM) aircraft band. Operate as one unit with an optional snap-on twin frequency display front panel, or remotely, out of the way, using the optional front panel extension cable. Also, control the radio remotely with the unique remote control mic with back-lit keypad, twin LCD display and speaker–built-in! Power: 50W (2m) 40W (440MHz). 40 memories (opt. 200 channel plug-in memory chip). CTCSS encode and decode built-in. Crossband repeat mode. Full-duplex crossband transmit and receive. DTMF paging and coded squelch. 8 scan modes, including CTCSS scan (each band scans separately). Dual frequency receive: 2-VHF, or 2-UHF, or 1-VHF and 1-UHF. Packet ready for 9600 (1200/2400) baud, and VHF/UHF interface; just add a TNC. Modifiable for MARS/CAP tx*. 1⅜"h x 5½"w x 5⁵⁄₁₆"d, 2.2 lbs.....**CALL**



▶CCR-708A Communications Test Receiver with Spectral Display Scope Full Coverage from 50 to 904.995MHz. LCD spectral display scope used for evaluating signal strength and tracking down near by interfering signals. 100 memory channels. AM, N/FM, and W/FM modes. Display range: 100 KHz, 250 KHz, or 1000 KHz. 13.8V DC or 120V with supplied AC adapter. 2⅞"h x 7⅞"w x 7⅞"d, 4.6 lbs .....CLOSE-OUT **$739.95**

Call the AES® BBS!

(414) 358-3472 (8-N-1 up to 14.4k baud)
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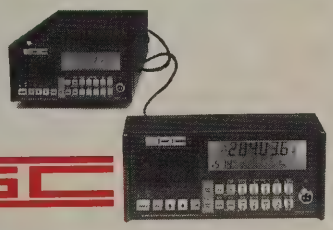
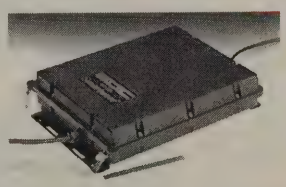
See p.p. 85, 86 and the Price List for other SGC products and accessories



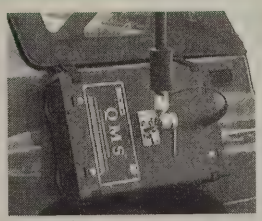
SGC

▶SG-2000 Amateur HF Transceiver A rugged Commercial Grade HF transceiver that provides 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode and data. Comes programmed with 644 ITU channels and 100 user defined channels that can be set to the Ham frequencies within the 1.8–30 MHz range; receives 500kHz-30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories in user adjustable scan speeds and rates. The large LCD, wide-angle display has adjustable backlighting which provides easy viewing night or day. The SG-2000 operates as a single unit, or the front panel can be removed to function as a remote head. Built-in computer control capability allows the SG-2000 to be controlled by any standard RSS-232 protocol connector for easy operation on all digital modes. Requires 12VDC @ 16A. 4¾"h x 10"w x 15"d, 12 lbs ...SGC 04-01 **$1479.00**

▶PowerTalk™ (04-22) Full featured control head for the SG-2000 transceiver. Incorporates adaptive signal processing and spectral noise subtraction to provide unsurpassed signal quality on HF bands. Intercept weak HF signals, increase signal clarity and eliminate unwanted noise. Hear SSB signal clearer and easier than before. **SG-2000 with PowerTalk Head (04-10)** All outstanding features of the standard SG-2000; 644 ITU and ham frequencies, programmable memory, large LCD display. Fast audio and visual tuning–a DSP command center with a high performance spinner knob and bright LEDs .....**CALL**



▶SG-230 The Smartuner® An automatic HF antenna tuner capable of tuning any length antenna from 8 to 80 ft. long with in the 1.8–30MHz frequency range; 160 meter operation requires a minimum length of 8 ft. Operates with very low power, even tunes itself on an SSB signal; handles up to 150W. A microprocessor controls the switching of 64 input and 32 output capacitor combinations, plus 256 inductance combinations in a pi-network to tune an unknown antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof,for mobile-marine! Requires 10–5VDC @ 0.9A.12"w x 16"d x 3"h, 8 lbs.....SGC 54-12 **$489.95**



▶QMS Antenna Tuner System The QMS is an SGC Smartuner® automatic antenna coupler, an SG-303 9 ft. extended full range antenna, and a special exterior-waterproof mounting package, all-in-one. It looks unusual, but it gives any mobile operating in the 1.8–30MHz range with up to 150W, an almost unbelievable jump in reception and transmitting range (3-20dB). Mounting the tuner on the outside reduces engine noise and eliminates power draining antenna wire runs between the antenna and tuner. It attaches to vehicle using high suction devices and nylon webbing, and provides a rugged antenna installation without drilling holes. 18"w x 12"d x 5"h, 24 lbs. .. **See Price List**

Prices • Trade-in Quotes
Orders • Information
1-800-558-0411

Hi! ... I'm Carl, WB9STM at Milwaukee
Call me for Super Values!

AES® in Action!...

AES® Super FEST '95

In May we invited the major ham manufacturers to participate in the largest open house event in our history. Showing up to take advantage of our big facility were representatives from:

ALINCO • ALPHA DELTA • ARRL • CQ MAGAZINE • CUSHCRAFT DIAMOND ANTENNAS • GLEN MARTIN • HAL COMMUNICATIONS • HEIL HY-GAIN • ICOM • KANTRONICS • KENWOOD • LARSEN • OPTOELECTRONICS • OUTBACKER • POLYPHASER • RF CONCEPTS • STANDARD TIME WAVE • UNIFIED MICROSYSTEMS • YAESU • Local Clubs, MARS, CAP

Over 700 Hams from five states attended and had a unique chance to conveniently talk directly with each of the reps and get valuable information on all areas of ham radio. The reps brought their regular hamfest displays with all of their latest products. No problem in our big facility, *it was something to see!*

There were over 100 prizes donated by the manufacturers for hourly drawings, and the Grand Prize was a round trip air fare and four nights for two at the MGM Grand Hotel in Las Vegas. The lucky winner was **Curtis Gemmel, KG9CA** of Milwaukee.

Another Fest is planned for April '96, and promises to be bigger and better...watch your mail!

Here are photos of some of the SuperFest action:

On the Air!...

Carl, WB9STM operating the station at **AES®** Milwaukee

OUR ANTENNA SYSTEM • 80–10 meters VHF & UHF • Packet • Satellite

AZDEN®

2, 6 & 10 Meter Handhelds

- ★ Heavy duty commercial grade construction designed to meet MIL-STD-810 provides exceptional ruggedness and weather resistance. 2 year limited warranty.
- ★ 5 Watt battery standard on all models.
- ★ Backlit LCD (liquid display)
- ★ Memories: 40 in 2 banks, plus 1 temporary.
- ★ DTMF Pager and Code Squelch
- ★ DTMF Telephone Memory: (7 numbers AZ-21A only)
- ★ Scan Memory Skip
- ★ Auto Power Shut-Off
- ★ Battery Power Saver: Approximately 28 mA in Save Mode
- ★ Dimensions: 6⅞"h x 2⅝"w x 1⅝"h
- ★ Weight: Approx. 1 lb.
- ★ TRANSMITTER: High Power 5 Watts; Low Power 0.5 Watts

▶**Model AZ-21A** 2-meters; 144–148MHz transmit, 136–174MHz FM plus 118-135.995 MHz AM receive ..... **CALL**

▶**Model AZ-61** 6-meters; 50–54MHz FM transmit, 46–54 MHz FM receive..... **CALL**

▶**Model AZ-11** 10-meters; 28–29.7MHz FM transmit, 28–29.995MHz receive..... **CALL**

AZDEN®

2, 6,10 Meter 220 & 440MHz Mobiles

Designed to meet the Heavy Duty requirements of MIL-STD-810...

- ★ C-MOS microcomputer control
- ★ Wide frequency coverage
- ★ Adjustable output power
- ★ Large amber backlit display
- ★ 20 channel memory
- ★ Priority channel
- ★ Repeater reverse
- ★ Offset
- ★ Programmable frequency step
- ★ Built-in programmable tone encoder
- ★ 20 channel memory
- ★ Keyboard up/down frequency selection
- ★ Feather-touch keyboard
- ★ Independent on/off power-switch
- ★ Lithium battery back-up
- ★ Multi-function microphone
- ★ Optional tone squelch decoder unit
- ★ 2"h x 5.5"w x 7.25"d

▶ **PCS-7000H** 2-meters; 144–148MHz transmit, 136–174MHz FM plus 118-135.995 MHz AM receive, 50/10W..... **CALL**

▶**PCS-7500H** 6-meters; 50–54MHz FM transmit, 46–54 MHz FM receive, 50/5 watts..... **CALL**

▶**PCS-7800H** 10-meters; 28–29.7MHz FM transmit, 28–29.995MHz receive, 50/5 watts..... **CALL**

▶**PCS-7200** 220MHz; 215–230MHz FM, 25/5W ..... **CALL**

▶**PCS-7300H** 440MHz; 420–470MHz FM, 35/5W ..... **CALL**

▶*New!* **PCS-9600D** 440MHz; 430–450MHz FM, 35/10W. A 9600 baud data radio. Plug & play from from panel..... **CALL**

AZDEN Headphones

The **DM-10** (top) and the **HS-03** with Boom Microphone (bottom) have been specifically designed to enhance voice reception and transmission. The lightweight, soft ear pads and adjustable headband permit long hours of use. The earphones on both models have a 20Ω impedance and a 200-5000Hz response with a 6dB rise at 2400Hz, 1/4" phone plug is supplied. The dynamic boom microphone on the HS-03 features a 500Ω impedance and a 300-4000Hz response with a 6dB rise at 2500Hz. 8-pin connector is supplied. **DM-10 $55.95 • HS-03 $49.95**

ALINCO®

FALL 1995

DR-150T

This exceptional 2 Meter Mobile is the new standard in satisfaction. 2 Meters with Airband receive + 440MHz receive.
50/25/10W power output adjustable. 100 Memories. Packetable 1200 or 9600 Baud with pin change. Air or Cable Cloning. (This allows two or more users to exchange CPU memory without a PC). Two VFOs. Channel Scope visually monitors
frequency action. Built-in S-meter Squelch and Squelch Timer. Three different scan modes. LITZ Emergency alert function. Remote control microphone with DTMF Standard.
6"W x 2"H x 7"D 3.75lbs.

DX-70T

HF+50MHz All Mode Transceiver. The DX-70T is compact and very user friendly. Wide range general coverage. 100 memories with 10 memory group scans. Detachable front panel. CW Auto Break-in. Built in narrow band filter. Full QSK.
2.25"(H) x 7"(W) x 9"(D)
6.25lbs.

DR-610T

This versatile radio gives the operator full command of the 2m and 440 bands. Mobile 2m(50W), 440(35W), 120 Memory Channels, 5 Memory Banks, V/V, U/U, LITZ, 9600 Baud Ready. Remote Control.

DJ-G5TH

2m/440, 5W output, 100 memory ch. per band, V/V, U/U, Backlit keypad, wideband receive, Air Cloning. Allows two or more users to exchange CPU memory without a PC.

ALINCO® ELECTRONICS INC.

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MOBILE TRANSCEIVERS

DX-70T

- Unique Super Compact Body
- This radio is easy to operate
- HF Bands & 50MHz Band Operation
- All mode
- Detachable Control Head
- Built-in narrow band filter
- CW Auto Break-in standard
- Speech Compressor is standard
- Tilt Up Stand
- Quick Offset
- 100 Memory Channels

DR-M06T

- 50 MHz Mobile Transceiver
- 100 Memory Channels
- CTCSS Encoder
- Time-Out-Timer

DR-150T

- Air Cloning
- UHF & Airband Receive
- 1200 or 9600 Baud Ready
- 100 Memory Channels
- 3 MultiScan Modes
- LITZ Function
- 2 Separate VFO's
- Channel Scope

DR-1200T

- Specially Tailored for Packet Radio
- 14 Multi Function memory Channels
- Compact Size & Light Weight
- 25 W Output
- 4 Scanning Modes
- 1200/2400 bps Compatible

DR-130T

- Commercial Quality
- 20 Memory Channels (Expandable to 100 Channels)
- 12 New CTCSS Tones (Total 50 Tones)
- Commercial Grade Features
- High Output Power

DR-610T

- 120 Memory Channels (Expandable to 240 Channels)
- Memory Bank
- Airband Receive Standard
- Built-in Duplexer
- RF Attenuator
- TX/RX LED
- 9600 bps Ready

DR-600TB

- Cross Band Repeat
- Wide Frequency Coverage
- 3 Output Power Selections
- Simultaneous Dual Band Receive
- 28 Memory Channels
- Built-in CTCSS Encoder
- Remote Controllable from your Hand Held Transceiver

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ALINCO®

HANDHELD TRANSCEIVERS

DJ-G5T/TY/TH

- Advanced Technology
- VHF/UHF, VHF/VHF or UHF/UHF Receive
- 100 Memory Channels per band
- RF Attenuator
- Built-in Tone Burst
- Airband Receive Standard
- Air Cloning Capability

DJ-G1T

- Channel Scope
- 2m or UHF-Dual Band Receive
- DTMF Squelch (DSQ Pager)
- 80 Memory Channels
- 8 Channel Steps

DJ-582T/TH

- Simple Operation
- Full Duplex Dual Watch Function
- DSQ (DTMF Squelch) Function
- Cross Band Repeat
- 40 Memory Channels
- Airband Receive Standard
- 8 Scanning Modes

DJ-180T /TH

- Durability Built-in
- 10 Memory Channels (Expandable up to 200 Channels)
- Simple Operation
- Odd Repeater Offsets
- Commercial Grade Features

DJ-191T/TH

- Easy Operation
- Cloning Capable
- 40 Memory Channels
- DSQ Coded Squelch Built-in
- 9 Autodialer Memory Channels
- Tone Burst
- Compact Design
- Tone Encoder with 50 tones
- Large Display

DJ-F1T/TH

- Rugged & Compact
- 40 Memory Channels
- Wide Band Receiving Range
- Illuminated DTMF Keypad
- 8 Scan Modes
- Programmable VFO Range Function

[TH=5 Watts Output]

ALINCO® ACCESSORY LIST

HANDHELDS

RADIO	Battery Standard	Battery Hi-pwr	Battery Long-life	Battery Slim	Dry-cell case	Quick Charger	Soft Case (Hi-pwr)	DC Cable	DC Cig Cable	DC Cig w/ filter	Ear-phone	Speaker Mic	Remote Sp/Mic	Earphone Headset w/ VOX	Earpad Headset w/ VOX	CTCSS Decode Unit	CTCSS Encode Unit
DJ-180T	EBP-26N	EBP-28N	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-18	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	N/A	EME-13	EME-12	Standard	Standard
DJ-480T	EBP-26N	EBP-28N	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-18	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	N/A	EME-13	EME-12	Standard	Standard
DJ-180TH	EBP-28N	Standard	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-19	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	N/A	EME-13	EME-12	Standard	Standard
DJ-G1T	EBP-30N	EBP-32N	EBP-31N	N/A	EDH-14	EDC-52	ESC-23(24)	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	EJ-16U	Standard
DJ-F1T	EBP-16N	EBP-18N	N/A	EBP-14N	EDH-5	EDC-34/45	ESC-15	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	EJ-12U	Standard
DJ-F1TH	EBP-18N	Standard	N/A	EBP-14N	EDH-5	EDC-34/45	ESC-15	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	EJ-12U	Standard
DJ-191T	EBP-37N	EBP-36N	EBP-34N	EBP-33N	EDH-16	EDC-60	ESC-29	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	EJ-28U	Standard
DJ-191TH	EBP-36N	Standard	EBP-34N	EBP-33N	EDH-16	EDC-60	ESC-30	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	EJ-28U	Standard
DJ-580T	EBP-20N	EBP-22N	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-17(26)	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard
DJ-582T	EBP-26N	EBP-28N	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-17	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard
DJ-582TH	EBP-28N	Standard	EBP-24N	N/A	EDH-11	EDC-34/45	ESC-26	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard
DJ-G5T	EBP-33N	EBP-36N	EBP-34N	EBP-33N	EDH-16	EDC-60	ESC-28	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard
DJ-G5TY	EBP-37N	EBP-36N	EBP-34N	EBP-33N	EDH-16	EDC-60	ESC-29	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard
DJ-G5TH	EBP-36N	Standard	EBP-34N	EBP-33N	EDH-16	EDC-60	ESC-30	EDC-37	EDC-43	EDC-36	EME-6	EMS-9	EMS-8	EME-13	EME-12	Standard	Standard

MOBILES

	Mic	Option Mic	Power Cord	Bracket	CTCSS Decode	Remote kit 5'	Remote kit 9'9"	Remote kit 16'5"	80ch expand	120ch expand
DR-1200T	N/A	EMS-10	PC-15	MB-110						
DR-130T	EMS-11	EMS-14	PC-15B	MB-130	EJ-20U				EJ-19U	
DR-150T	EMS-12	EMS-14	PC-15B	MB-130						
DR-600TB	EMS-3	EMS-14	PC-15	MB-570	EJ-7U		EDC-19	EDC-20		
DR-610T	EMS-12	EMS-14	PC-15B	MB-130	EJ-24U		EDS-2	EDS-3		EJ-23U
DR-MO6T	EMS-11	EMS-14	PC-15B	MB-130						
DX-70T	EMS-42	EMS-14	PC-25	EBC-9		EDS-4				

ALINCO® ELECTRONICS INC.

ALINCO ELECTRONICS INC.
438 Amapola Ave., Unit 130, Torrance, CA 90501
Phone: (310) 618-8616 Fax: (310) 618-8758

HERE'S WHAT THE EXPERTS HAVE TO SAY ABOUT AZDEN.

PCS-7000H 2-METER MOBILE

(QST 1/95) ..."With its ample heat sink, the PCS-7000H ran cool, even during long-winded conversations at the 50W level. The Azden is the only radio in this group to offer a two-year warranty... This radio receives as well as it transmits."

PCS-7500H 6-METER MOBILE

(73 8/94) ..."its handheld PTT microphone has a solid feel and produces solid transmit audio. Its receive audio is full, loud and undistorted, and sounds better than many mobile rigs. And the rig is beautiful... maybe the only game in town for a moderately priced 6-meter FM rig." ***(Radio Fun 10/94)*** ..."The Azden PCS 7500H exceeds my performance expectations! It's a real bargain in today's ham equipment marketplace and every 7500H owner I've talked to agrees with me!"

PCS-7200 220MHz MOBILE

(73 3/95) ..."An excellent entry-level radio for newcomers and oldtimers alike. With 25 watts output power and sensitive, selective receiver, it's a 'workhorse' radio that will serve a variety of needs."

AZ-61 6-METER HANDHELD

(QST 3/95) ..."With the AZ-61, Azden brings the convenience of an H-T to the 6-meter FM World... The design is rugged and Azden backs the durability with a two-year warranty (unique in the amateur equipment market)... The AZ-61 was a pleasure to use. The radio performed well in all applications: mobile, portable, and home." ***(CQ 1/94)*** ..."I was pleasantly surprised to hear just how good it sounds, both on receive and to the other operator on transmit. The ability to program so many different aspects of the radio also makes it quite attractive... Did I say that I enjoy using the radio? I certainly do! You will also enjoy owning one of them." ***(73 11/93)*** ..."This IS an advanced-featured handheld...I like it. I like the Azden AZ-61 6-meter a lot."

AZ-21A 2-METER HANDHELD

(CQ 2/95) ..."The reception of weak signals was outstanding with this unit... It is certainly one of the best I have ever heard... From a performance standpoint, I would give the AZ-21A a very high rating."

PCS-9600D VOICE/DATA TRANSCEIVER

(QST 5/95)..."Putting it simply, the PCS-9600D is an outstanding transceiver. In fact, it is the only single-mode base/mobile rig that we've tested that is truly 9600-bit/s ready... The Azden PCS-9600D offers the best of both worlds. It's a capable 440-MHz voice rig and a true "9600-baud ready" packet transceiver."

5 Locations • Large Stocks • Low Prices • Top Trades • Fast Shipping • Toll Free Lines • 4 In-House Service Centers • AES® Credit Card

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AMATEUR ELECTRONIC SUPPLY®
OVER 38 YEARS IN AMATEUR RADIO!

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Wickliffe, OH 44092
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407-894-3238 • 800-327-1917
Fax 407-894-7553

CLEARWATER, FL
1898 Drew Street
Clearwater, FL 34625
813-461-4267 • 800-557-4237/FL
Fax 813-443-7893

LAS VEGAS, NV
1072 N. Rancho Drive
Las Vegas, NV 89106
702-647-3114 • 800-634-6227
Fax 702-647-3412

GRIP IT. LIVE IT.

New Dual Band! Wide band HT!
C508A

DUAL BAND ANTENNA

STANDARD has done it again!

Great radios come in small packages. First came the C108A - the tiniest 2m radio - operates on 2AA batteries and fits in your shirt pocket.

Next, GREATNESS evolved into the C508A the DUAL BAND big brother to the C108A - it too, fits in your shirt pocket and operates on 2AA batteries, and more... The C508A has 280mW of output (comparable to low power of most HT's operating on a nicad battery pack) adequate power to hit most local repeaters with its helical designed antenna.

Take it anywhere.

The C508A is perfect for HAMFESTS, picnics, hiking, or while using your mobile rig in cross- band repeat mode, for quick access to a distant repeater. Be confident that your carrying the BEST amateur radio - you've got a STANDARD. STANDARD has exceptional RF features, incredible extended receive capabilities and solid transmitting performance.

Specifications

- Frequency Coverage: 100-180 MHz
  Receive: Approx: 340-400 MHz
  Transmit: Ham bands 400-480 MHz
- AM programmable for aircraft
- 60 memories + 2-VFO, 2-Call
- CTCSS 39 tones-Encode/Decode
- 22 menu selections
- RF squelch
- Freq steps, 5, 10, 12.5, 15, 20, 25, 30 and 50
- Scan types: Busy, Pause or Hold
  Scan: 1 MHz, Entire band, Program, Memory, Specific memory frequencies, Block and CTCSS
- PTT and Frequency lock
- Keyboard lock
- Tone burst: 1750 Hz
- APO: Auto Power Off
- Battery save: 4 steps
- Auto power off: adjustable
- Output power: 280 mW
- Operates from 3V "2-AA"
- Size approx: 2.28" W, 3.35" L, 0.98" D
- Weight approx: 5.65 oz

VHF & UHF IN YOUR SHIRT POCKET!!

FREQUENCY SELECTOR

EASILY PROGRAMMABLE MENU DRIVEN SCREEN

PLUG IN A CMP123 EAR-MIC

EASILY OPERATED VOLUME CONTROL

BACKLIT DISPLAY

TRUE PORTABILITY WITH TWO AA BATTERIES

EQUIPPED WITH BATTERY LOCK

60 FULLY PROGRAMMABLE MEMORIES

TINIEST HAND-HELD C508A

ACCESSORIES

- CHP111 Headset microphone
- CHP150 VOX microphone
- CLC502 Standard soft case
- CMP111 Speaker microphone
- CMP113 Tie pin microphone
- CMP115 Mini speaker microphone
- CMP123 Ear speaker/mic
- CNB401 NiCad battery pack
- CSA401A NiCad battery charger

C108A

STANDARD is the world's largest manufacturer of VHF-UHF Amateur Radio Equipment.
For further information contact your Standard dealer or call **(312)763-0081 FAX (312)763-3377**
Standard Amateur Radio Products, Inc. P.O. Box 48480 Niles, Illinois 60714

* Modifications for MARS/CAP transmit require an appropriate license.

Specifications, features and price are subject to change without obligation or notice.

SR STANDARD

WE'RE STANDARD AND WE'VE GOT YOUR STYLE!

Superior Intermod Rejection!

STANDARD PIONEERS ANOTHER FIRST!! THE C5718DA & C1208DA IS PACKET READY! Designed with packet in mind. Out-of-the-box high-speed, 9600 baud, interface. Just connect your TNC to the radio and you're on the high speed packet network. Also, operates at 1200 and 2400 baud equally well.

STANDARD HAS EVERYTHING IN THE SPEAKER-MIC WHILE DELIVERING UP TO 50 WATTS!

C5718DA TWIN-BAND MOBILE

50 Watts of power totally controlled from the microphone! Remote this radio anywhere!

Unsurpassed intermod rejection.
Built in Antenna Duplexer.
Dual frequency receive; two VHF, two UHF, or VHF/UHF
Frequency range:
Receives 110-199.995 MHz (including AM aircraft) and 250-499.995 MHz.
50 Watts 2M, 40 Watts 70cm
(3W Low, 10W Medium selectable)
Memories: 40 (20 per band); stores frequency, offsets and CTCSS tones.
200 memory channel option, CMU182.
CTCSS Encode /Decode standard.
Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz.
Full Duplex cross band operation with CTCSS tones.
Paging/Coded squelch.
DTMF autopatch dialing, 6 memories, 15 digits.
Eight kinds of scan, including priority and CTCSS.
Memory scan lock-out.
Back-lit Keypad and Display
Auto mute opposite band, three settings (-6, -12 and -18dB).
Cooling fan built-in.
Size: 5.51"W 1.57"H 5.31"D Weight 2.2 lbs..
Mobile bracket and power cord (2M) included.

C1208DA TWIN-BAND MOBILE

The smallest, lowest price 2 meter mobile radio that delivers all the features. Mount it under a seat or even in the trunk using the optional extension cable (CAW561 or CAW562).

Frequency range:
Receives 110-199.995 MHz (including AM aircraft) and 250-519.995 MHz.
50 Watts, 10W and 3W selectable
Built in Antenna Duplexer for 450 MHz receive
Memories: 100; stores frequency, offsets and CTCSS tones
CTCSS Encode/Decode standard.
Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz.
Paging/Coded squelch.
DTMF autopatch dialing, 10 memories, 15 digits.
Six kinds of scan, including priority and CTCSS.
Back-lit Keypad and Display
Auto mute: four settings (-10, -20, -30 and off)
Semi Duplex cross-band operation with CTCSS tones
Cooling fan built-in
Size: 5.51"W 1.18"H 5.79"D Weight 1.65 lbs..
Mobile bracket and power cord (3M) included.

MARS and CAP modification available (permit required).

Specifications, features and price are subject to change without obligation or notice.

STANDARD Amateur Radio, Products, Inc.
P.O. Box 48480, Niles, Illinois 60714

SR STANDARD®

STANDARD®

C158A 2 Meters
The Affordable HT

- 5 Watts at 12 VDC
- 20 memories
- 130-170MHz extended receive
- Unsurpassed 0.158 microvolts sensitivity
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

*Modifiable for MARS/CAP

C168A 2 Meters
The Deluxe Small HT

- 5 Watts at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

*Modifiable for MARS/CAP

C178A 2 Meters
(+ low power 440)
The Deluxe Dual-Band HT

- Single-Band Price 5 W (2M) at 12 VDC & 50mW (440)
- 40+ memories (or optional 200+ with plug-in chip)
- 110-174 & 320-474MHz extended Rx (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

*Modifiable for MARS/CAP

C288A 220MHz
The Slim-Line HT
Fits in your shirt pocket!

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-249MHz super extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

C188A 2 Meters
The Slim-Line HT
Fits in your shirt pocket!

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

*Modifiable for MARS/CAP

C468A 440MHz
The Deluxe Small HT

- 5 W at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 400-474MHz extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

*Modifiable for MARS/CAP

STANDARD is the world's largest manufacturer of VHF-UHF Amateur Radio Equipment.
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Standard Amateur Radio Products, Inc.
P.O. Box 48480 Niles, Illinois 60714

* Modifications for MARS/CAP transmit require an appropriate license.
Specifications, features and price are subject to change without obligation or notice.

ICOM HF

IC-781

IC-781

- HF (150 W) AM (75 W)
- Multi Function CRT Display
- Dual Watch • Built-in Tuner
- Quad Conversion Receiver
- Twin Passband Tuning
- Built-in Power Supply
- 99 Memory Channels

Dimensions/Weight: 16.1"(W), 5.9"(H), 16.2"(D), 50.7 lb

IC-736/IC-738

IC-736/IC-738

IC-736:
- HF+6 M (100 W) AM (40 W)
- Internal Tuner (6 M also)

D/W: 13.0"(W), 4.4"(H), 11.2"(D), 23.1 lb

IC-738:
- HF (100 W) (AM 40 W)
- Internal Tuner

D/W: 13.0"(W), 4.4"(H), 11.2"(D), 19.0 lb

Both:
- New "I-Loop" DDS (1 Hz Res.)
- Internal Power Supply
- 100% Full Duty Cycle (2 Fans)
- PBT and Notch Filter
- Separate CW Jacks
- 101 Memories • RF Gain Control
- Auto Antenna Selector
- Quick Split Function (Pre-programmable)
- 4 Function Meter (PO/SWR/ALC/S)

IC-775DSP

IC-775DSP

- IF-DSP (Digital Signal Processing) Tx/Rx
- 200 W Stable Output Power (SSB/AM/FM/XCW/RTTY)
- Built-in Heavy Duty Power Supply
- Automatic IF Notch Filter
- Adjustable DSP Noise Reduction
- Level/Width Variable Noise Blanker
- PSN Modulation • Audio Peak Filter
- Dual Watch (2 Receivers)
- Twin Tuning Knobs • Twin Pass Band Tuning
- Power MOS FET's • CW Pitch Control
- Electronic & Memory Keyer

Dimensions/Weight: 16.7"(W), 5.9"(H), 15.4"(D), 36.8 lb

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THE NEXT GENERATION

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ICOM HF

IC-706

- HF + 6 M (100 W) SSB/CW/AM/FM/RTTY
- 2 M (10 W) SSB/CW/FM/RTTY
- All Modes
- Detachable Control Panel/Display
- SSB/CW/AM Narrow Filter Options
- 101 Alphanumeric Memories (99 Split)
- General Coverage Rx
- Noise Blanker • IF Shift
- Preamp/Attenuator • CW Keyer
- CW Pitch Control • Full Break-in (QSK)
- Speech Processor • VOX/XFC
- LCD Display with 1 Hz Readout
- Easy-to-use Scroll Menu System
- Voice Synthesizer Option (UT-102)
- Tone Encode Built-in
- 2 Antenna Connectors (HF/VHF)

Dimensions/Weight: 6.6"(W), 2.3"(H), 7.9"(D), 5.5 lb

IC-707

IC-707

- HF (100 W) AM (25 W)
- All Modes
- General Coverage Rx
- Minimum Number of Keys
- Front Facing Speaker
- Large Display • Rugged Construction
- 100% Continuous Duty Cycle
- 32 Memory Channels

Dimensions/Weight: 9.5"(W), 3.7"(H), 9.4"(D), 9.1 lb

IC-728

IC-728

- HF (100 W) AM (25 W)
- All Modes
- General Coverage Rx
- Triple Conversion Receiver
- Passband Tuning
- Speech Compressor
- 26 Memory Channels • Dual VFO's
- Direct Digital Synthesizer
- Microphone Included

Dimensions/Weight: 9.5"(W), 3.7"(H), 9.4"(D), 10.1 lb

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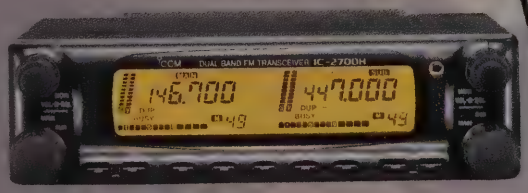
ICOM® Mobiles

IC-2000H

IC-281H/
IC-481H

IC-2350H

IC-2700H
with FREE HM90A
Infrared Mic Upgrade



IC-Δ100H

IC-2000H (2 M)

- Wide Band Rx (118–174 MHz)
- Highly Intermod Resistant
- 50 Watts of Power
- 50 Memory Channels with Alphanumeric Display
- Affordable Price

Dimensions/Weight: 5.9" (W), 2.0" (H), 5.9" (D), 2.4 lb

IC-281H (2 M)/IC-481H (440 MHz)

- IC-281H – 2 M (50 W) Tx/Rx, 440 MHz Rx
  IC-481 – 440 MHz (50 W) Tx/Rx, 2 M Rx
- 50 Watts of Power
- 70 Allocateable Memory Channels
- 10 Scratch Pad Memories
- Data Switch & Connector for 9600 bps Packet

Dimensions/Weight: 5.5" (W), 1.6" (H), 6.7" (D), 2.1 lb

IC-2350H (Dual Band)

- 2 M (45 W)/440 MHz (35 W)
- Ultra-High Speed Scanning
- 110 Channel Capacity Backed Up with EEPROM
- Wide Band Rx (118–174 MHz)

Dimensions/Weight: 5.5" (W), 1.6" (H), 8.1" (D), 2.6 lb

IC-2700H (Dual Band)

- 2 M (50 W)/440 MHz (35 W)
- Detachable Control Panel
- Full Remote Control Microphone or Optional Infrared Microphone
- 122 Memory Channels

Dimensions/Weight: 5.5" (W), 1.6" (H), 7.0" (D), 3.2 lb

IC-Δ100H (Tri Band)

- 2 M (50 W), 440 MHz (35 W), 1.2 GHz (10 W)
- 8 Different Combinations of 2 M, 440 MHz & 1.2 GHz Tx and Rx • 642 Memories
- Detachable Front Panel
- Full Remote Control Microphone

Dimensions/Weight: 5.5" (W), 2.0" (H), 7.7" (D), 4.5 lb

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ICOM Handhelds

IC-T22A/
IC-T42A

IC-W31A

IC-Δ1A

IC-Z1A

IC-T22A (2 M)/IC-T42A (440 MHz)

- Fun, Shirt Pocket Small and Easy to Use!
- Large Alphanumeric Display
- 5 W @ 13.5 V (3 W Out of the Box)
- Air Band Receive
- 80 Memory Channels (40 w/Alpha Display)

Dimensions/Weight: 2.3" (W), 4.3" (H), 1.1" (D), 10.9 oz.

IC-W31A (2 M/440 MHz Dual Band)

- 5W @ 13.5 V (3 W Out of the Box)
- 100 Memories with Alphanumeric Display
- Alphanumeric Message & Paging
- Backlit Display and Keypad
- Wide Band Rx (Including Air Band)
- V/V, V/U, U/U Operation
- Encode/Decode

Dimensions/Weight: 2.2" (W), 4.9" (H), 1.2" (D), 12.0 oz

IC-Z1A (2 M/440 MHz Dual Band)

- 5W @ 13.5 V (3 W Out of the Box)
- Detachable Remote Control Speaker Mic with Full Functional Control & Dual Band Display
- 100 Memories with Alphanumeric Display
- Alphanumeric Message & Paging
- Backlit Display and Keypad
- Wide Band Rx (Including Air Band)
- V/V, V/U, U/U Operation
- Encode/Decode

D/W: 2.2" (W), 4.9" (H), 1.2" (D), 12.0 oz

IC-Δ1A (Tri Band)

- 2M (5 W), 440 MHz (5 W) & 1.2 GHz (1 W)
- Simultaneous Receive
- 3 Independent Displays
- Crossband Double Duplex
- Programmable Digital Squelch
- Speaker Selection
- 78 Memory Channels

D/W: 2.3" (W), 5.7" (H), 1.9" (D), 1.4 lb.

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MICROPHONES • HEADSETS • ACCESSORIES

HEIL PRO-SET
Boomset Headphones

A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Specify HEIL HC-4 or HC-5 mic cartridge (below) **$131.00**

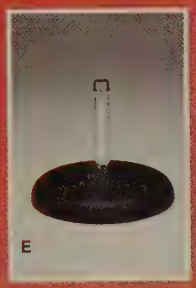
AD-1 Adapter cables for use with ICOM, KENWOOD or YAESU transceivers ..... **$14.99** ea.

HEIL PRO-MICRO
Boomset Headphones

NEW!

The Pro Micro is the newest additional to the Heil Pro line. It replaces the old BM-10 and BM-5 series headsets. It is simply a miniature version of the Pro Set. It's main feature besides being smaller and lighter weight is that it does not cover the entire ear. Hams want to hear their surroundings. Using the Heil Pro-Micro you can do just that. Available with the HC-4 or HC-5 element (below) **$105.00**

AD-1 Adapter cables for use with ICOM, KENWOOD or YAESU transceivers ..... **$14.99** ea.



PRO 5 (A) To answer the concern of not covering both ears, the Pro 5 was created. Provides all of the same quality and performance as the Pro Set with out covering the right ear. Available with either the HC-4 or HC-5 element (below). Use AD-1 adapter (above), specify HC-4 or HC-5 ..... **$120.00**

HM-10 MICROPHONE (B) Hand-held studio-style microphone with desk stand or boom mount options. Choice of HEIL cartridges. Operate PTT or VOX, it's designed to work with virtually any late model transceiver. When ordering specify HC-4 or HC-5 cartridge (below) **$63.96**

HM-10 DUAL (C) Amateur Radio's *ultimate* microphone. Versatile - has *both* HC-4 DX element and HC-5 Full Range microphone cartridges built-in, and switch selectable for varying conditions **$112.96**

HM-10 CABLES (D) Designed to work with any transmitter. When ordering specify your radio and the HM-10 will be shipped with the correct color coded cables. Specify for ICOM (HEI CC1I), KENWOOD (HEI CC1K) or YAESU (HEI CC1Y), ... **$25.99**

TB-1 TABLE BASE (E) For HM-10 microphones. 6" high, heavy (2 lb., 10 oz cast base with non-skid cork feet. **$19.95**

MA-1 BOOM AND CLAMP ASSEMBLY (F) For HM-10 microphones. The boom is adjustable from 6" to 24" and attaches to desk or shelf, or hangs from ceiling. Swivels 360°, and places HM-10 or DUAL TEN microphone exactly where needed. Use FS-1 footswitch for convenient, hands free PTT operation **$49.99**

FS-1 FOOT SWITCH (G) Handy foot control of PTT function of any transmitter. Non-skid rubber pad, top and bottom, supplied with 7 ft. cable and ¼" phone plug. **$26.95**

REPLACEMENT MICROPHONE CARTRIDGES

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the "sound of your station, you can solve this problem by replacing the cartridge in your microphone with a ***HEIL KEY ELEMENT*** for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

HEIL HC-4 – *The DX Dream Machine*

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response.of 500Hz–3800Hz with a 10dB peak at 2000Hz, and a sharp 12dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h **$29.95**

HEIL HC-5 – *The Key Element*

The replacement microphone cartridge for everyday Rag Chewing. Engineered with full range articulation and maximum voice clarity. Not mushy, bassy paging-type audio, but very clear, easy to understand SSB audio. Response: 350Hz–4000Hz. with a sharp roll-off under 300Hz and above 3100Hz with a peak at 2100Hz. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h **$29.95**

To hear or not to hear?

Introducing the remarkable new TS-870S HF All-Mode Transceiver with Next Generation **IF-Stage DSP**

Intelligent Digital Enhanced Communications System

DSP at the IF stage is now a reality with Kenwood's new TS-870S HF transceiver. This new design uses state-of-the-art DSP chips that provide for receiving enhancements to bring signals out of the noise. Imagine over 100dB out of pass band attenuation with virtually no signal loss by the DSP filter! Imagine CW bandwidth adjustable to 50 Hz! Advanced speech processing with transmit equalization that will make you the first in pile-ups! Plus, complete computer operation and control of the TS-870S is possible with supplied MS Windows® software and a built-in RS-232C port. Enjoy future technology now with the TS-870S.

TS-870S
HF TRANSCEIVER

FEATURES

▮ IF Stage Digital Signal Processing ▮ Multi-Function Digital Filtering (no optional filters required) ▮ Dual-Mode Noise Reduction ▮ Beat Canceller ▮ Auto Notch Filter ▮ Variable AGC ▮ Selectable Voice Equalizer (SSB & AM) ▮ Speech Processor ▮ Selectable Transmit Equalizer ▮ High Speed (57.6 kbps) Computer Control with MS Windows® Software included ▮ Built-in RS-232C Port ▮ 100 Watts Output on SSB, CW, FM, FSK; 25 Watts on AM ▮ 100 kHz ~ 30 MHz General Coverage Receiver ▮ Full -Function K1 LogiKey Keyer ▮ Built-in Automatic Antenna Tuner (TX & RX) ▮ 2 Antenna Terminals ▮ Receiver Antenna Terminal ▮ Dual VFOs with 100 Memory Channels Plus 5 Quick Memory Channels ▮ Full Band Scan, Programmable Band Scan, Group Scan, Memory Scan with Memory Channel Lock-Out ▮ Built-in Tone Encoder (FM) ▮ Easy-to-use Menu System for Quick Setting of Functions ▮ High Quality 60 Second Digital Recording Unit Option (DRU-3) ▮ Voice Synthesizer Unit Option (VS-2)

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KENWOOD

95ARD-1256

Have TS-50S, Will Travel!

*Custom Travel Case

*Optional

TS-50S
HF TRANSCEIVER

For the Amateur Radio enthusiast, going "beyond bounds" is what it's all about. That's why Kenwood created the TS-50S, the world's smallest and smartest HF transceiver. The choice is yours: you can mount it in a vehicle, take it on a DX-pedition, or even install it permanently as a base station transceiver. Yet despite its size, the TS-50S provides a maximum output of 100W and the sort of sophisticated features normally found only inside a shack. Take for example the 100 memory channels for independent storage of transmit/receive parameters, the microprocessor-controlled DDS with innovative "fuzzy" control, and Kenwood's own AIP for superior dynamic range. There's also a powerful menu system, IF shift and CW reverse mode for interference reduction, TF-SET, and a noise blanker--plus everything you need for split-frequency operations. So, if you want HF operation beyond bounds, check out the TS-50S at your favorite authorized Kenwood Amateur Radio Dealer today!

Features

- 500kHz-30MHz general coverage receiver
- DDS(Direct Digital Synthesizer) with fuzzy logic control
- Large LCD panel with digital bar meter
- Auto-mode capability
- Menu system
- AIP (Advanced Intercept Point)
- Switchable AGC Circuit (SLOW/FAST)
- All-mode squelch
- CW reverse mode
- Full break-in and semi break-in
- 20dB attenuator
- Multi-function microphone supplied
- RF output power control (100W, 50W, 10W)
- Optional 500Hz CW filter (YK-107C)
- Optional external antenna tuner(AT-50)
- Optional computer interface (IF-10D)

95ARD-1286

KENWOOD

Explore New Frontiers!

Advanced technology moves Kenwood's HF rigs to the top.

TS-450SAT/S • TS-690S

- 160m to 10m amateur band operation, 500kHz to 30MHz general coverage receiver • 6m amateur band and 50-54MHz general coverage receiver (TS-690S)
- DDS (Direct Digital Synthesizer) & digital PLL system
- AIP (Advanced Intercept Point) system
- Automatic antenna tuner (built-in or optional)
- IF shift function tuning • AF notch filter
- Heavy duty cycle design • 100 memory channels

TS-850SAT/S

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver • DDS (Direct Digital Synthesizer) & digital PLL system • AIP (Advanced Intercept Point) system Automatic antenna tuner (built-in or optional)
- IF slope tuning • IF notch filter
- Electronic message keyer circuit with weighing control
- 100 memory channels • Digital recording system (optional)

TS-950SDX

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver
- Built-in DSP (Digital Signal Processor)
- MOS-type FET final section • Dual frequency receive
- 150W PEP output (SSB/CW/FSK/FM)
- DDS (Direct Digital Synthesizer) • Menu system
- AIP (Advanced Intercept Point) system
- Automatic antenna tuner • IF slope tuning • IF notch filter
- 100 memory channels • Built-in AC power supply

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KENWOOD

94ARD-1049

MIL-SPECS/TOP SPECS!

Pure and simple, the concept reads like this: "rock-solid performance with straitforward operation, at an affordable cost". And Kenwood's TM-241A (144MHz) FM mobile transceiver symbolizes this perfectly. Great looks and rugged construction are just the beginning. The TM-241A's user-friendly controls make mobile QSOs a snap, and a powerful 50-watt amplifier lets you work simplex with confidence or hit those distant repeaters. Reception specs are equally impressive: intermod characteristics have been improved* to reduce interferance from strong adjacent band signals. Plus, there are 20 multi-function memory channels for programming combinations of frequency, sud-audible tone, and repeater offset.

So, if you're looking for true mobile performance, go back to the basics and reach for Kenwood's TM-241A.

Features

- 144-148 MHz TX, 144-174 MHz RX
- 50 watts RF output
- 20 multi-function memory channels
- Large LCD display with illuminated keys
- Full band scan, programmable band scan memory scan with channel lock out
- Tone operated & carrier operated scan modes
- Built-in selectable CTCSS tone encoder
- Auto repeater offset
- Time alert with elapsed time indicator
- DTSS for selective calling and paging (with optional DTU-2)
- Time out timer
- Auto power off with warning beeper
- Meets U.S. military standards for shock and vibration (MIL-STD 810C/D/E)*
- Modifiable for MARS/CAP use (permit required)

These specifications guaranteed for Amateur band only.
*Current K&K2 versions with serial number 5080000 or later.

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KENWOOD

95ARD-1296

Kenwood's TM-942A/742A/642A—

Your Choice Of Bands

Good things come in threes. Like Kenwood's distinctive TM-942A (144MHz/440MHz/1200MHz), TM-742A (144MHz/440MHz), and new TM-642A (144MHz/220MHz)—high-performance FM multibanders that demonstrate the best in mobile communications technology. Besides offering triple receive and display capability, the TM-942A can even receive all three bands simultaneously. For the TM-742A and TM-642A, you can choose one of several optional band units, enabling triple band operation with the same triple simultaneous receive. Top-notch features include 101 memory channels (all available for split operation), automatic band change, DTSS with page, and S-meter squelch. There's even a wireless remote control function. Yet operation is remarkably simple, thanks to sophisticated microprocessor control, high-visibility illuminated keys, and clear status displays. You wouldn't expect any less from Kenwood. But there's more: you can mount the controls and display separately from the main unit (requires optional kit) for unique 3-way convenience.

Features

- Max. 50W output (144MHz), 25W (220MHz), 35W (440MHz), 10W (1200MHz)
- 101 memory channels & memory bank system
- Independent SQL & VOL controls for each band
- Automatic band change
- Built-in DTSS selective calling feature with page
- Selectable frequency step
- 8 scan modes per band
- Time Operated & Carrier Operated scan stop modes
- Direct frequency entry with supplied microphone
- Tone alert with elapsed time indicator
- S-meter squelch, noise squelch & auto squelch
- Cross-band repeater
- Muting for sub-band circuit
- Multiple lock functions
- Wireless remote control function
- Built-in CTCSS encoder & optional TSU-7 decoder
- Date & time display, stopwatch, alarm & on/off timer
- 3-position RF output power control
- Auto power-off with warning beeper
- Time-out timer
- Separate control & display units (optional cable kits)

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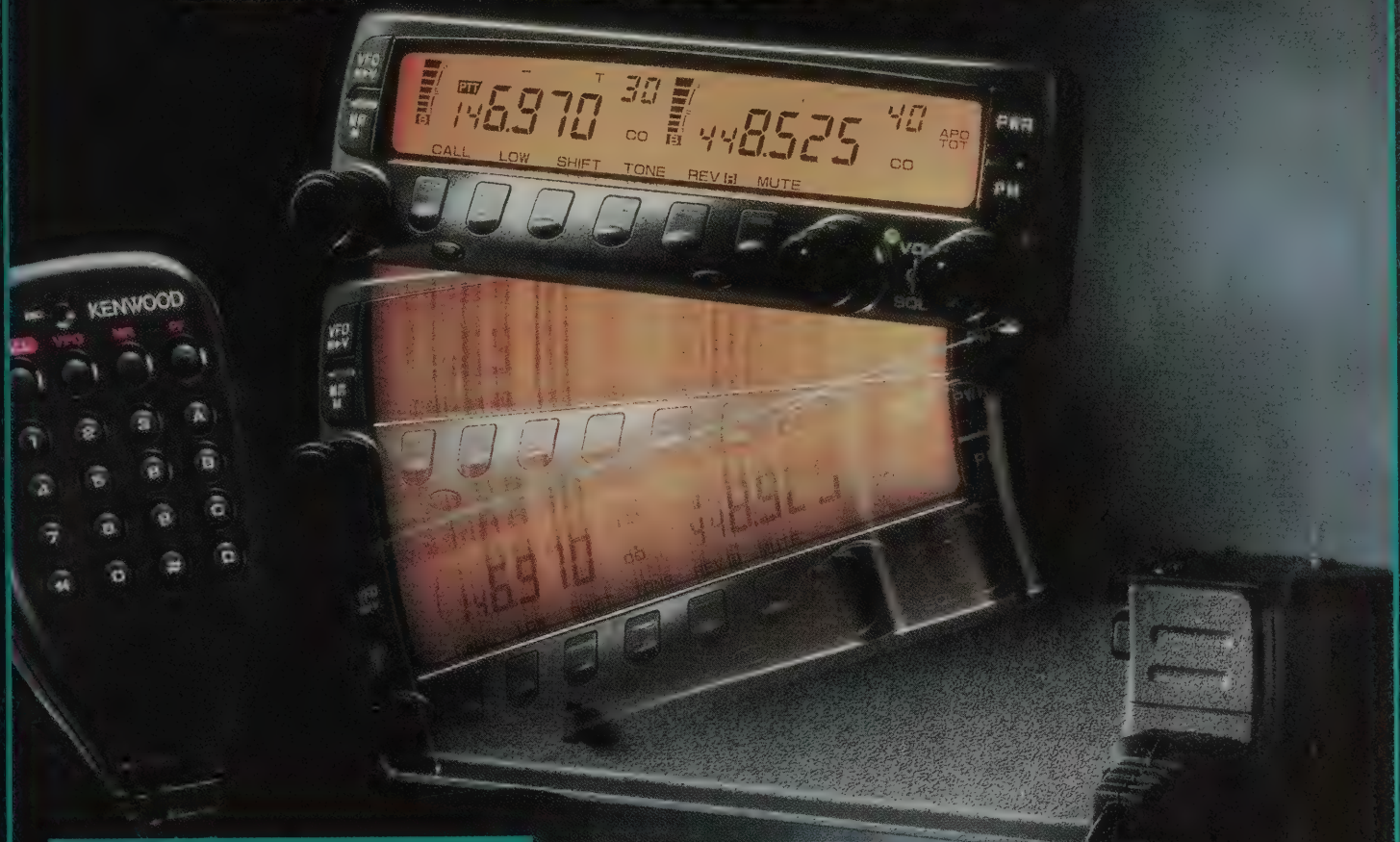
KENWOOD

95ARD-1292

Kenwood's TM-733A -

Easiest Dual Band on Wheels



TM-733A

FM DUAL BANDER

1200/9600 bps packet compatible

Theft Deterrent

Features

- Max.50W output (144MHz), 35W (440MHz)
- "6-in-1" programmable memory
- 72 memory channels
- Time-Operated & Carrier-Operated scan stop modes
- Dual receive on same band (VHF+VHF or UHF+UHF)
- Built-in DTSS selective calling with page
- ASC (Auto Simplex Checker)
- Built-in CTCSS encoder & optional TSU-8 decoder
- Key function display ■ Automatic band change
- AIP (Advanced Intercept Point) ■ Cross band repeater
- Selectable frequency step (5, 10,12.5, 15, 20 or 25kHz)
- Wireless clone function ■ Incremental MHz key
- S-meter squelch
- Tone alert system with elapsed time indicator
- Separate speaker terminals for each band (switchable)
- Auto repeater offset (144MHz)
- Repeater reverse switch & offset switch
- 3-position RF output power control
- Dimmer control ■ Auto power-off

* An optional accessory kit is required to mount the front panel separately from the main unit.

Kenwood's new FM dual bander, the TM-733A (144MHz/440MHz), is specially tailored for hassle-free mobile communications with a unique "6-in-1" programmable memory. Six entire operating profiles -including everything from frequency range to dimmer level- can be stored, ready for instant recall. So there's virtually no need to adjust your settings. The detachable front panel has a high-visibility LCD with key function display to make on-the-move operation even easier. Of course, this compact transceiver has a full complement of sophisticated features, including 72 memory channels, DTSS selective calling and page functions, ASC (checks whether you can switch from a repeater to simplex communications), AIP (Kenwood's exclusive circuit for enhancing RX performance) and a jack for 1200/9600 bps packet use. And as well as receiving simultaneously on VHF and UHF bands, the TM-733A can receive two frequencies on the same band (VHF+VHF or UHF+UHF). There's even an optional quick-release kit as an added anti-theft measure. So check out the TM-733A-a sensation bred from inspiration.

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KENWOOD

95ARD-1252

Kenwood's TH-22AT/42AT: The Compact Solution!

144 MHz/450 MHz single band HTs

More Power !

Features

- 3-watt output from MOS FET power module and supplied 6-volt battery (TH-22AT: approx. 3 watts, TH42AT: approx. 2.5 watts), and 5-watt output with optional PB-34!
- Compact design: 2-3/16 x 4-5/8 x 1 in.
- Built-in DTMF keypad with monitor
- Built-in DTSS page system
- Large 1-7/16" speaker
- 41 E²PROM channel memories (including 1 call channel)
- Multiple scan functions (VFO, call & memory)
- Carrier-operated & time-operated scan stop modes
- Tone alert with elapsed time indicator
- Battery-saver circuit and auto power-off function to extend battery life
- Selectable squelch configuration
- RF output power control (Hi/Low/EL)
- Built-in CTCSS encoder, optional TSU-8 decoder (any tone can be stored in any channel)
- User-friendly menu system to customize your operating preferences
- Easy to program and use
- Modifiable for MARS and CAP. Specifications guaranteed for amateur bands only. Permits required for MARS and CAP use
- Wide range of accessories to enhance operating convenience and enjoyment

Slim, compact, lightweight. These words describe the exterior of the new TH-22AT Series HTs. Rugged, innovative, sturdy. These words describe what is on the inside. Because, along with the beauty, this new series of HT has all the things you want in a portable communications package. Like a streamlined, easy to program interface, one touch controls and a simplified menu of functions that you can customize to suit your needs. Even a DTMF memory that stores five of your favorite 15-digit telephone numbers for autopatch use. Wide band receive - 136 to 173.99 MHz. A new, innovative microprocessor and final amplifier circuit enables a full five watts, while conserving battery power. (The supplied battery provides **3 watts**.) Easy mobile operation with optional PG-3H cable.

As always, a full line of accessories is available to enhance your operating enjoyment!

See your favorite Authorized Kenwood Amateur Radio Dealer for all the details!

Modifiable for MARS/CAP use. Permits required. Specifications guaranteed for Amateur band only.

93ARD-0829

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Low Drain, No Pain!

Clones! Clones!

Cloning allows you to copy all memory channel information from one TH-79A(D) to another TH-79A(D)

TH-79A (Deluxe)

FM DUAL BANDER

Information at your fingertips. Everything you need to know about operating the new TH-79A(D) FM dual-bander (144MHz/440MHz) can be viewed in its unique dot-matrix LCD with alphanumeric display. No need for the manual. In addition to this innovative guide function, the TH-79A(D) sports a user-friendly menu system, providing easy access to the many powerful features of this slim-line handheld transceiver. Such as 82 non-volatile memory channels with ID, DTSS and page functions, and a DTMF memory function for autodial operation. Full-crossband duplex operation is available, as is the ability to receive two frequencies on the same band (VHF+VHF or UHF+UHF) simultaneously. And thanks to the FET power module, long hours of operation are possible on one charge. With the TH-79A(D), transceiver technology enters the 21st century.

Features — NEW 5-WATT VERSION NOW AVAILABLE

- 2.7 approx. output (144MHz), 2W approx. output (440MHz) from MOS FET power module and supplied 6V battery; 5W approx. output using optional PB-34 ■ Dot-matrix LCD with menu/guide system
- 82 non-volatile memory channels with ID
- DTMF keypad with memory function
- DTSS (Dual-Tone Squelch System) with page
- Built-in CTCSS tone encoder/decoder ■ Automatic band change
- Power-on call sign display ■ Auto repeater offset (VHF)
- Wide-range flexible antenna ■ Input overvoltage warning
- 3-position output power control
- Auto power-off and battery save function ■ Time-out timer
- Memory channel lock-out (scan mode)
- Cross-band repeater function ■ Page answer-back function
- Channel display function ■ Wideband receiver coverage, including AM (receive on the aircraft band)* ■ Clone function
- Modifiable for MARS/CAP use**

*Specifications guaranteed for Amateur bands only.
**Permits required. Specifications guaranteed for Amateur bands only.

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95ARD-1138

KENWOOD

What's Amateur Radio worth to you?

You invest every year in equipment, antennas and other Amateur Radio accessories. You probably insure your gear because it's valuable and expensive to replace.

Is Amateur Radio valuable to you? Are your privileges worth protecting? And can you insure that the Amateur Radio you know and enjoy today will continue into the future? **Not alone.**

The American Radio Relay League is Amateur Radio's best representative wherever rules are made governing the Amateur Radio spectrum. **There is no other organization in the United States that works on behalf of Amateur Radio with Congress and the FCC.** Today, the **ARRL** is your voice in all worldwide arenas where the allocation and management of radio spectrum are discussed.

Can the ARRL maintain a formidable presence in Amateur Radio matters? **Not alone.**

The key to a strong ARRL will always be our membership. Each member, simply by joining, plays a pivotal role in Amateur Radio decision-making and preservation.

Can you join another organization and receive a monthly magazine? Obviously, we think ***QST*** is your best choice for an Amateur Radio journal, but there are others. The question is: **Do you want more for your money than just a magazine each month?**

As an **ARRL Member** you'll receive ***QST*** and have access to **"Members Only"** benefits and services. Beyond the immediate benefits, your membership provides essential support to **the only US organization dedicated to fighting for Amateur Radio and for you.**

Is ARRL membership worth it? **Is Amateur Radio important enough to help insure its future? It's your decision.** Please fill out the membership application and mail it today.

Yes, Amateur Radio is important to me and I want to be part of its future. Please enroll me as an ARRL member and rush my first issue of *QST* and membership certificate.

Class of License _____ Call Sign _____ Date of Application _____

Name _____

Address _____

City _____ State _____ Zip _____

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Please Check:

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❑ I'm eligible for a one-year, $25, 65 years or older rate.
Proof of age in the form of a copy of my birth certificate or driver's license is enclosed.

❑ Payment Enclosed

❑ Charge to ❑ VISA ❑ MasterCard ❑ Amex ❑ Discover

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Cardholder's Signature _____

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A World Leader in Communications

40th Anniversary

SINCE 1956

YAESU

Performance without compromise.℠

FT-990
HF Transceiver

A self-contained base station with space-saving, built-in AC power supply, the FT-990 is incredible on a crowded band. Only HF with dual digital SCAF, its plug-in board design and simple front panel provide pure QSO enjoyment.

Features

- Frequency coverage:
  RX: 100 kHz-30 MHz
  TX: 160-10 m Amateur Bands
- Built-in Dual Digital Switched Capacitance Filters (SCAF)
- Built-in High Speed Antenna Tuner w/39 Memories
- RF Frequency-Shift Speech Processor (FSP)
- Dual VFOs w/Direct Digital Synthesis (DDS)
- 90 Memory Channels store Frequency mode and Bandwidth
- Band Stacking VFO System
- Full and Semi Break-in CW Operation
- Multi-mode Selection on Packet/RTTY; Interface to TNCs
- Adjustable RF Power
- Variable Threshold Noise Blanker
- Optional Digital Voice Recorder (DVS-2)
- Front Panel RX Antenna Selection
- DC Version Available without Power Supply

FT-900AT
Compact HF Transceiver

The first HF to go mobile in any vehicle or stay at home as a compact base station. Its remote front panel design and unique Omni-Glow™ LCD display, plus performance and ease of operation in one small package, makes this transceiver the right choice for you.

Features

- Frequency coverage:
  RX: 100 kHz-30 MHz
  TX: 160-10 m Amateur Bands
- Built-in Auto Antenna Tuner
- Direct Keypad Entry when used as a Base Station
- Omni-Glow™ LCD Display
- 100W on SSB, CW, FM modes; 25W on AM
- IF Shift and 30dB Notch Filter
- Digital S/RF, SWR, & ALC Meters
- Direct Digital Synthesis (DDS)
- Programmable CTCSS Encode w/Repeater Offset
- 100 Memory Channels
- CW Full Break-in Keying w/ Adjustable Speed
- Fast/Slow AGC Circuit
- Intercept Point Optimization (IPO)
- Duct Flow Cooling System
- Twin Band Stacking VFOs
- Built-in Noise Blanker
- Built-in Adjustable Speech Processor

FT-1000
HF Transceiver

Judged "best overall" by top DX'ers worldwide, the FT-1000 delivers optimum receiver performance and real "muscle" on transmit. It's a perfect blend of electronics and human engineering with a dramatic front panel featuring two flywheel-weighted tuning knobs and two large displays. Hear signals you've never heard before with the FT-1000.

Features

- Frequency coverage:
  RX: 100 kHz-30 MHz
  TX: 160-10 m Amateur Bands
- RF Output Power Up to 200 Watts
- True Cross-band Dual Receive: Two Large Tuning Knobs
- Front Panel RX Antenna Switch; For Beverage or Loop
- Built-in Antenna Tuner w/32 Memories
- Direct Digital Synthesis (DDS)
- 100 Memory Channels: Independent ATU and Mode/IF Filter Memory
- CW Spot and Two CW Key Jacks for Maximum Convenience
- Dynamic Range: 108 dB
- Optional Digital Voice Recorder (DVS-2): 16 Sec. each RX/TX
- FT-1000D Deluxe version available

FT-840
Compact HF Transceiver

A wealth of features and high-tech performance in the field or mobile, this HF won't break your budget. With its new intense LCD display, die-cast heat sink and internal thermally switched fan, you'll take this perfect companion with you everywhere.

Features

- Frequency coverage:
  RX: 100 kHz-30 MHz
  TX: 160-10 m Amateur Bands
- Direct Digital Synthesis (DDS)
- IF Shift
- 100 Memory Channels (Independent TX/RX per memory)
- Twin Band Stacking VFOs
- FM Repeater Operation
- Automatic 10-Meter Repeater Offset w/Selectable CTCSS Encode
- CW Reverse Feature
- Choice of Two Optional Antenna Tuners:
  FC-10 Matching External Antenna Tuner
  FC-800 External Remote Antenna Tuner

FT-736R
Multi-Mode VHF/UHF Full Duplex Base

Designed to meet the needs of the most demanding VHF/UHF and satellite operators, the FT-736R covers up to four of the 50, 144, 220, 430 MHz and 1.2 GHz bands with installable band modules. The FT-736R can be powered from 13.5 VDC or its built-in AC power supply.

Features

- Frequency coverage:
  2 m: 144-148 MHz
  70 cm: 430-450 MHz
- 100 Memory Channels
- Full Cross-band Duplex with Inverted Tracking for AO-13
- Easy Interface to TNC via Data In/Out Jack
- Independent Linear Amplifier Relay Control Lines (Each Band)
- Optional modules for 50-54 MHz, 222-225 MHz and 1240-1300 MHz
- RF Output Power:
  25 Watts on 144, 222, 430 MHz
  10 Watts on 50 and 1240 MHz

FT-5100
Dual Band Mobile

Compact with a built-in antenna duplexer the FT-5100 defined "dual band" with two, 2-meter RX frequencies or two UHF frequencies. Not only is the FT-5100 the smallest dual band made, it's the only one that comes with its own backlit DTMF Mic. An unbeatable combination!

Features

- Frequency coverage:
  2 m: RX: 130-174 MHz
  TX: 144-148 MHz
  70 cm: RX/TX: 430-450 MHz
- 94 Memory Channels (47 per Band), Odd Splits On Any Memory
- Dual In-Band Receive (V/V, U/U or V/U Receive Operation)
- DTMF Paging and Coded Squelch
- Packet Radio TNC Jack Built-in to Back of Radio
- CTCSS Encode Built-in (Decode Optional)
- Dual Receive with Balance Control
- Full Duplex Cross Band Operation
- Built-in Cross Band Repeat
- Built-in Antenna Duplexer
- Backlit DTMF Mic
- Automatic 8 Level Display Dimmer
- RF Output Power:
  2 m: 50/5 Watts (high/low)
  70 cm: 35/5 Watts (high/low)

FT-8500
Dual Band Mobile

This top-of-the-line, compact FM mobile includes extraordinary new features. Like Spectra-Analyzer™ to view station activity above and below a frequency, or within memory banks, and the FS-10 Smart Controller™ Microphone, for transceiver control in the palm of your hand. The next generation is here!

Features

- Frequency coverage:
  2 m: RX: 110-180 MHz
  TX: 144-148 MHz
  70 cm: RX: 420-470 MHz
  TX: 430-450 MHz
- Built-in Spectra-Analyzer™
- 6-Character Alpha-Numeric Display
- FS-10 Smart Controller™ Microphone
- 110 Memories (in 5 memory banks)
- Omni-Glow™ Display
- Digital Battery Voltage Display
- Dedicated Packet I/O jack (1200/9600 baud)
- 3-Level Auto-Mute with Mute Timer
- AM Aircraft Receive (110-136 MHz)
- V+V, U+U or V+U Dual Receive
- 3 Selectable Power Output Levels
  2 m: 50/10/5 W
  70 cm: 35/10/5 W
- Auto Power Off (APO) and Time-out Timer (TOT)
- 10-Memory DTMF Autodialer
- Cloning Feature
- 5 Scanning Modes including new Clear Scan
- Selectable Scanning Speed
- Cross-band and One-way Repeat
- Dual Speaker Jacks
- Easy-to-Understand Feature Menu

FT-2200/7200
2-M/70-cm Mobiles

The mobiles that fit in anyplace. Smaller, sleeker and first with 3 power levels stored in each memory. The FT-2200 (and FT-7200) is designed to fit into today's more compact cars and comes with more memories than any competing model. You just won't leave home without it.

Features

- Frequency coverage:
  FT-2200 RX: 110-180 MHz
  TX: 144-148 MHz
  FT-7200 RX/TX: 430-450 MHz
- 50 Memory Channels
- AM "Aircraft" Receive (110-139 MHz)*
- Built-in DTMF Paging and Coded Squelch
- Backlit DTMF Mic
- Small Compact Size
- RF Output Power (Stored in Each Memory):
  FT-2200 50/20/5 Watts (high/med/low)
  FT-7200 35/15/5 Watts (high/med/low)

* FT-2200

FT-2500M/7400H

2-M/70-cm Mobiles

Nothing is tougher than the FT-2500M (and FT-7400H) when rough and rugged mobile is the call. Huge LCD Display and backlit DTMF Mic make night-time operation safer. The FT-2500M is the first 2-meter amateur radio to be awarded a MIL-STD 810 rating for shock and vibration. Performance and strength for mobile or base station operation.

Features

- Frequency coverage:
  - FT-2500M RX: 140-174 MHz
  - TX: 144-148 MHz
  - FT-7400H RX/TX: 430-450 MHz
- 31 Memory Channels, Odd Splits On Any Memory
- Alpha Numeric Display
- Advanced Track Tuning (ATT)
- Automatic Display Dimmer
- True FM Modulation
- Backlit DTMF Mic
- CTCSS Encode Built-in (Decode Optional)
- Five Scanning Functions
- 3 Selectable Output Power Levels
  FT-2500M 50/20/5 Watts
  FT-7400H 35/15/5 Watts

FT-290/690/790RII

VHF/UHF Multi-Purpose Mobiles

Just sling it over your shoulder and go. To the top of the mountain or that remote campsite. True field operation performance for fun or serious emergency situations.

Features

- Frequency coverage:
  - FT-290RII RX/TX: 144-148 MHz
  - FT-690RII RX/TX: 50-54 MHz
  - FT-790RII RX/TX: 430-450 MHz
- RF Output Power:
  - FT-290RII 25 Watts (2 Watts Portable)
  - FT-690RII 10 Watts (2 Watts Portable)
  - FT-790RII 25 Watts (2 Watts Portable)
- All Mode Operation USB, LSB, CW, FM

Remote Control Wireless Mic

MW-2 (FT-5100/5200/6200/2200/7200)

No tangled cords to worry about, just step away from your mobile rig and talk. Perfect for "backseat" drivers or navigators. Available as an accessory.

Backlit DTMF Microphone

Exclusive to Yaesu, and included with every FM mobile sold, this backlit mic helps to insure safe autopatch operation in dim light and during night-time use. Designed for ease of use, the large keypad is invaluable. May be purchased separately. See Yaesu Amateur Products Accessories and Options Brochure for exact model number fitting your mobile.

FT-2200

FT-290RII

FT-2500M

FT-530

Dual Band Handheld

This handful of exclusive features includes dual in-band receive on VHF or UHF, Dual CTCSS Decode, Transmit Battery Saver, built-in VOX and 82 memory channels. More than any other HT radio in its class. The FT-530 has no equal!

Features

- Frequency coverage:
  - 2 m: RX: 130-174 MHz
    TX: 144-148 MHz
  - 70 cm: RX/TX:430-450 MHz
- 82 Memory Channels
- 4 TX Output Power Levels:
  w/FNB-25: 2.0/1.5/1.0/0.5 Watts
  w/FNB-27: 5.0/3.0/1.5/0.5 Watts
- Dual In-band Receive (V/V, U/U or V/U)
- DTMF Paging and Coded Squelch
- Auto On-Timer with Built-in Clock and Alarm Function (AOT)
- Automatic Battery Saver (ABS)
- Digital Battery Voltage Readout
- CTCSS with Dual Decode Built-in
- Automatic Tone Search (ATS)
- Backlit Keypad and Display w/Time Delay
- Built-in Cross-band Repeat Function
- Automatic Power Off (APO)
- 5 Watts Output w/FNB-27 Bat. or 12 VDC
- Built-in VOX

MH-29A2B

Display Speaker Mic

LCD Display mic with remote functions for hassle-free mobile operation. (For use with FT-530 and FT-51R.)

FT-51R

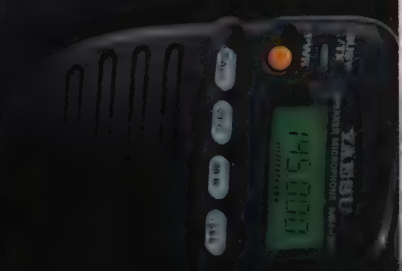
Dual Band Handheld

The first dual band HT with scrolling instruction menu "windows"! Spectrascope™ too, for continuous real time activity scanning in VFO or 8 user-choice memories.

Features

- Frequency coverage:
  - 2 m: RX: 110-180 MHz
    TX: 144-148 MHz
  - 70 cm: RX: 420-470 MHz
    TX: 430-450 MHz
- 120 Memory Channels (80 w/Alpha-Numeric)
- Spectrascope™ LCD Display
- Scrolling User Help Menu
- 8 Character Alpha-Numeric Display
- Up/Down Volume/Squelch Controls & Display
- Selectable Sub-Band TX Mute
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive
- Scanning Light System (SLS)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- User Selectable Lock Function w/15 Combinations
- Automatic Power Off (APO)
- TX/RX Battery Savers Built-in
- Handy Cloning Feature
- 5 Selectable Power Output Levels
- Message System with CW ID
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in
- 3 Dual Receive Configurations – VHF/VHF, UHF/UHF, & VHF/UHF

NEW



FT-11/41R

2-m/70-cm Handhelds

World's smallest size HT with a full sized keypad. You'll wonder how we did it, till you remember Yaesu pioneered 2-way radio micro technology. It's full-featured and pencil thin with a 4.8V battery for 1.5 watts on TX. Just punch up the exclusive backlit DTMF keypad and Volume/Squelch control, set the alpha numeric display and start talking!

Features

- Frequency coverage:
  - **FT-11R** 2 m: RX: 110-180 MHz, TX: 144-148 MHz
  - **FT-41R** 70 cm: RX: 420-470 MHz, TX: 430-450 MHz
- Selectable Alpha Numeric Display
- Compact Battery Design
  - 4.8V produces 1.5 Watts
  - 9.6V produces full 5 Watts
- 150 Memory Channels (75 when Alpha Numeric)
- AM "Aircraft" Receive (110-136 MHz)
- Small Size: 4"H x 2-1/4"W x 1"D
- Automatic Battery Saver (ABS)
- MOS FET Power Module
- Backlit DTMF Keypad and Display
- Backlit Up/Down Volume/Squelch Controls
- DTMF Paging/Coded Squelch
- Automatic Power Off (APO)

FT-411E/911

Compact FM Handhelds

For FM performance under strenuous climatic conditions, the FT-411E (and FT-911) stands up like the champ it is. Features and durability make this radio the choice of amateurs worldwide.

Features

- Frequency coverage:
  - **FT-411E** 2 m: RX: 130-174 MHz, TX: 144-148 MHz
  - **FT-911** 23 cm: RX/TX: 1240-1300 MHz
- 49 Memory Channels
- CTCSS Encode/Decode Built-in
- Built-in VOX
- Backlit Keypad and Display
- Automatic Power Off (APO)
- Programmable Battery Saver
- Multiple Scan Modes

FT-23/33R

VHF/UHF FM Handhelds

Ultra compact and microprocessor controlled, these HTs offer the convenience of small size yet simple operation. Designed for years of rugged use, housing will withstand a standard EIA drop test without a problem.

Features

- Frequency coverage:
  - FT-23R 2 m: RX: 140-150 MHz, TX: 144-148 MHz
  - FT-33R 1.25 m: RX/TX: 222-225 MHz
- 10 Memory Channels
- Simple Operation
- Multiple Scan Modes
- Rugged Die-cast Frame

Rotators

You're looking at the only rotators manufactured by a major amateur radio communication company.

Who better to determine the best specifications and durability for precision amateur radio performance under all circumstances. Smooth and quiet without noisy wedge brakes, these rotators are housed in weatherproof, die-cast aluminum enclosures permanently lubricated for maintenance-free operation and years of service. Compatible with most U.S.A. made antenna tower accessory shelves, Yaesu rotators come with a One-Year Warranty.

Computer Controllers

Computer controllers for rotators now available. **GS-23** Computer Controller for Rotators: G-800SDX, G-1000SDX, G-2800SDX. **GS-232** Computer Controller for Satellite Rotator: G-5400B.

Model	Application	Mast Size	Rotator Size	Pre-sets	Wind Load
G-450XL	Light/medium-duty	1¼-2 inches	12½"H x 7½" Dia.	No	10 Sq. Ft.
G-800S	Medium-duty	1½-2½ inches	12½"H x 7½" Dia.	No	17 Sq. Ft.
G-800SDX	Medium-duty	1½-2½ inches	12½"H x 7½" Dia.	Yes	17 Sq. Ft.
G-1000SDX	Heavy-duty	1½-2½ inches	12½"H x 7½" Dia.	Yes	23 Sq. Ft.
G-2800SDX	Extra Heavy-duty	1⅞-2½ inches	13⅝"H x 8" Dia.	Yes	34 Sq. Ft.
G-5400B	Azimuth-Elevation Rotator combination	1½-2½ inches (Boom Dia. 1¼-1⅝ in.)	Mounted together 12½"H x 7½" Dia.**	No	11 Sq. Ft.
G-500A	Elevation only	1½-2½ inches (Boom Dia. 1¼-1⅝ in.)	10½"H x 7½" Dia.	No	12 Sq. Ft.

Accessories: **CG-038** Mast Clamp, CG-048 Mast Clamp, **GS-050** Thrust Bearing, **GS-065** Thrust Bearing. Not Shown: G-800S, G-800SDX, G-1000SDX.

**Wind load ratings are valid when rotator is mounted in tower.*

***Rotator size mounted together.*

G-450XL

A new entry-level rotator priced low, for light to medium duty antennas. Maximum antennas wind load, 10 sq. ft.

VHF/UHF REPEATERS

VXR-5000V
135-148 MHz 25 Watt

VXR-5000U
400-450 MHz 25 Watt

These compact synthesized DC-powered repeaters are manufactured by Yaesu for their Vertex Radio Communications commercial product line. Now available for amateur use. The repeaters can be wall mounted or installed in a standard 19" rack. (Optional mounting kit required.)

Specifications	
Frequency Coverage	135-148 MHz or 430-450 MHz
Power Output	2-25 Watts @ 100% duty cycle
Current Consumption	7.0A @ 13.8 VDC
Frequency Stability	5 ppm
Programmable Features	Frequency, CTCSS, Hi/Low Power levels, Hang timer, Time-out timer
Programming	Optional VX VPL-1 programming kit

FRG-100
Communications Receiver

Winning the prestigious 1992 World Radio TV Handbook award for "Best Communications Receiver" when introduced is reason enough to make the FRG-100 your receiver. And if that's not enough, consider its industry-exclusive features like adjustable SSB carrier offset and user selectable 10 Hz, 100 Hz or 1 kHz tuning steps. Or the exciting Broadcast Band mode with 16 pre-programmed international broadcast bands. Even 50 memory channels and twin 12/24-hour clocks to keep you tuned in where and when you like – day or night! Join the experts and make the FRG-100 your "best communications receiver", too.

Features

- Frequency coverage: 50 kHz-30 MHz
- 50 Memory Channels
- Twin 12/24-Hour Clocks
- User Selectable Bandwidths
- Alarm and Timer Functions
- Dual Antenna Jacks (Coax and Open Wire)

Accessories

FM Unit-100: FM Receiver Unit
TCXO-4: Temperature Compensated Crystal Oscillator
PA-11B: 117 V AC Adapter
PA-11C: 220 V AC Adapter
YF-110C: CW Filter (500 Hz)
YF-110CN: CW Narrow Filter (250 Hz)

Specifications	
Frequency Range	50 kHz-30 MHz
Mode	USB, LSB, CW, AM, FM (optional)
Dimensions (W x H x D)	9¼ x 3⅝ x 9⅝ inches 238 x 93 x 243 mm

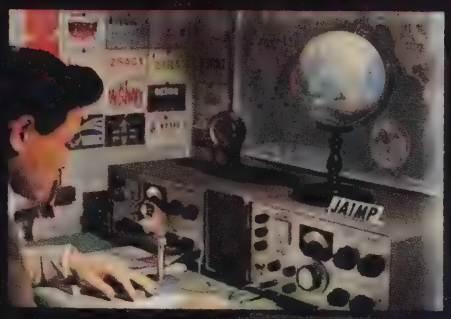
G-2800SDX
The new top of the line rotator for extra heavy duty antenna installations. Maximum antenna wind load, 34 sq. ft.

G-500A
Elevation rotator for space communication antennas. Maximum antenna wind load, 12 sq. ft.

G-5400B
Azimuth-Elevation combination for space communication antennas. DIN connection provided for computer operation. Maximum antenna wind load, 11 sq. ft.

EDSP RX/TX

All-Mode HF Transceiver FT-1000MP



The year was 1956. Electronic communication throughout the world was on the threshold of significant and remarkable change. Intrigued by the development of single-sideband radio theory, a young engineer and amateur radio experimenter painstakingly assembled an SSB transmitter. Word of his successful efforts spread quickly among his friends, and soon radio amateurs from all over the country were requesting transmitters just like it. Thus was born the first invention of JA1MP, founder of Yaesu. Though his key is now silent, in tribute to his leadership and exceptional contributions to the radio art, the FT-1000MP carries the memory of his call sign.

An HF Masterpiece, Combining the Best of Digital and RF design technology. The FT-1000MP.

Specifications

- EDSP (Enhanced Digital Signal Processing)
- Shuttle-jog Rapid Tuning Enhancement
- Directional Tuning Scale for CW/Digital mode and clarifier offset display
- Dual In-Band Receive w/ Separate S-Meters
- Selectable Antenna Jacks
- Collins SSB Mechanical Filter built-in, 500 Hz CW Collins filter plug-in, optional
- Selectable Cascaded Crystal and Mechanical IF Filtering (2nd and 3rd IF Filters)
- User-programmable Tuning Steps w/0.625 Hz High Resolution Low-Noise DDS Circuit
- Custom Feature Set-up via New Menu System
- Adjustable TX Output Power: 5-100W (5-25W AM)
- True Base Station: Both 100-117 or 200-234± VAC 10%, 50/60 Hz and 13.5 VDC Power Inputs

Blending digital and RF technology, the FT-1000MP features a Yaesu exclusive: Enhanced Digital Signal Processing (EDSP). Beginning on the receive side with Yaesu's industry-standard high-intercept front end design, the RF signal is then fed to the IF stages, where an impressive array of 8.2 MHz and 455 kHz IF filters (including a built-in Collins SSB Mechanical Filter) establish the tight shape factor so important in obtaining high dynamic range and low noise figure. Finally, the EDSP system provides specially-designed filter selections and response contours for maximum intelligence recovery.

Only with this combination of EDSP, independently selectable 8.2 MHz and 455 kHz IF filters, and a low-noise DDS local oscillator system can receiver performance without compromise be obtained. You can customize your FT-1000MP by choosing from 2.0 kHz, 500 Hz, and 250 Hz optional, cascaded IF filters, then zero in on weak signals using Yaesu's exclusive Shuttle-jog Rapid Tuning Enhancement and high-resolution (0.625 Hz) DDS VFO. Without question, the FT-1000MP is the most technologically advanced HF rig today.

EDSP operates in both transmit *and* receive modes. On receive, the EDSP produces enhanced signal-to-noise ratio and significantly improved intelligence recovery during difficult situations involving noise and/or interference. The result of hundreds of hours of laboratory and real-world experimentation, EDSP's 4 preset random noise reduction protocols and 4 digital filtering selections are controlled by easy-to-use concentric controls on the front panel of the transceiver. High, low, and mid-range cuts for voice work are teamed with razor-sharp CW bandpass filters and an automatic notch filter which identifies and attenuates undesired carriers or heterodynes. Also operational in the transmit mode, EDSP provides 4 performance-enhancement pattern selections for different operating circumstances, ensuring best readability of *your* signal on the other end of the path.

Once again, Yaesu's engineers have reaffirmed the vision and dedication of JA1MP which began nearly 40 years ago. See the incomparable FT-1000MP today.

FT-1000/D
Legendary 200W
All Mode HF Transceiver
"The Dream Station"

YAESU
Choice of the World's top DX'ers

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17210 Edwards Road, Cerritos, CA 90703
(310) 404-2700

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COMPUTER PROGRAMMABLE

Dual Band Mobile FT-8500

"Each of the mics function the same, and the radio is PC programmable with ADMS-2!"

"Look, the digital voltage display monitors my car battery voltage, too!"

"I like the Spectra-Analyzer. It keeps track of my favorite repeaters, and checks UHF and VHF channel activity."

"Yaesu did it again!"

Features

- **Frequency Coverage:**
  2m RX: 110-174 MHz
  TX: 144-148 MHz
  70 cm RX: 410-500 MHz
  TX: 430-450 MHz
- Spectra-Analyzer™ w/adjustable signal width, spacing & span markers
- 6-Character Alphanumeric Display
- 110 Memories (in 5 memory banks)
- Omni-Glow™ Display
- Digital voltage display
- Selectable 1200/9600 baud
- 3-Level Auto-Mute w/Mute Timer
- V+V, U+U, V+U Dual Receive
- 3 Power Output Levels
  2 m 50/10/5 Watt
  70 cm 35/10/5 Watt
- Built-in Auto Power Off (APO) and Time-out Timer (TOT)
- MIL-STD 810
- 9 Memory DTMF Autodialer
- PC Programmable w/ADMS-2
- 3 Scanning Modes w/ Clear Scan
- Adjustable LCD Contrast/ Brightness Control
- **Accessories:**
  Consult your local Yaesu dealer.

The only alphanumeric dual band mobile now comes with a choice of two unique microphones.

FS-10
Smart Controller™
Microphone
Use unique Joystick-type lever to command functions.

NEW

MH-39
DTMF Microphone
All functions conveniently at your fingertips including two user-programmable buttons.

Rear-panel data jack for packet with 6-pin connections for Data Input, PTT, 9600 bps and 1200 bps Receive Data, Squelch Status, Ground.

ACTUAL SIZE
5.6 x 1.6 x 6.4 in. (140 x 40 x 160 mm)

Rotary Dial Selector Knob
Select memories and other settings according to the current mode functions.

For the first time ever, the only dual band mobile with alphanumeric capability is available with two microphones. Customize your mobile radio use by choosing the high-tech FS-10 Smart Controller™ Microphone with its unique Joystick-type lever, or the new MH-39 DTMF Microphone which includes convenient handheld programmability. The FT-8500 has a built-in function menu, so you can program the radio from the microphone, or use the exclusive, optional new ADMS-2 Windows™ Software Kit. An unbeatable combination—user-friendly Yaesu engineering, and state-of-the-art performance.

The FT-8500 offers more than a choice of microphones. Watch the exclusive Spectra-Analyzer™ exhibit station activity above and below your current operating channel. See the digital voltage readout monitor your car battery voltage big and bold in the Omni-Glow™ display. View frequencies and custom alphanumeric messages at the same time in V+V, U+U or V+U. What's more, the FT-8500 features handy cloning, selectable 1200/9600 baud, and a rear-panel data jack for packet!

The company who defined dual band for amateur radio has now made it better. The FT-8500, with two microphones to choose from, and a host of terrific features for exciting operation, and extraordinary performance. We give you a choice, the FT-8500/FS-10 or the FT-8500/MH-39. Make it today!

VHF&VHF, UHF&UHF, VHF&UHF Select three dual band configurations. Shown with custom 6-character alphanumeric code.

SPECTRA-ANALYZER™ Display station activity above and below current operating channel. Exhibit programmed channel signal strength in Memory Recall.

DIGITAL VOLTAGE DISPLAY Monitor automobile battery voltage. Choose 1200 or 9600 bps from Menu Selectable Packet Baud Rate.

YAESU

Performance without compromise.℠

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Cerritos, CA 90703 (310) 404-2700

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ADMS-1B COMPUTER PROGRAMMABLE

Ultra Compact Handhelds FT-10/40R

ARTS
Tracks range of 2 identically programmed HTs.

TOP NOTCH™
Multi-function knob controls programming and volume.

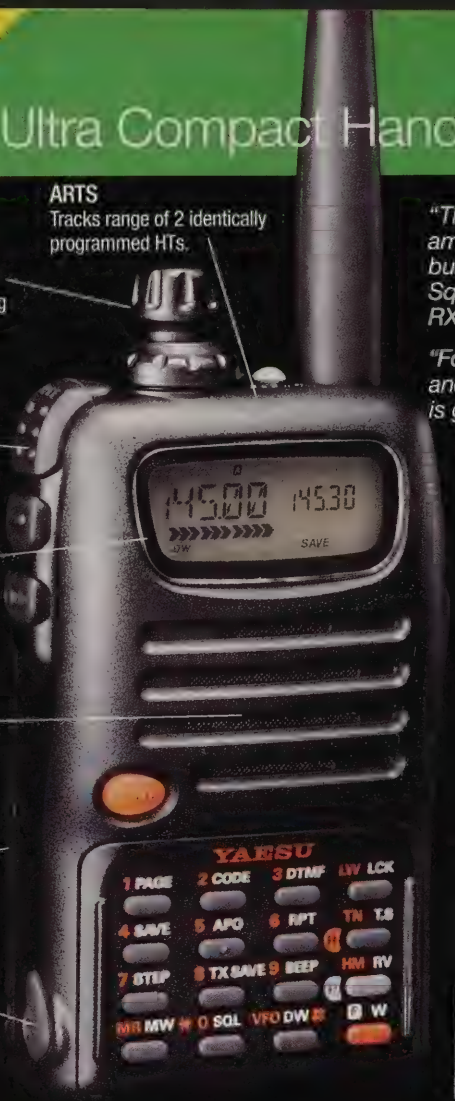
PTT THUMB SWITCH
Ergonomically designed, conveniently located, insures maximum comfort.

ALPHANUMERIC DISPLAY
Allows 4-character labelling of important frequencies.

SUPER LOUD AUDIO
State of art miniaturization givest greatest RX volume and clarity.

RUBBER GASKETS
Protects against corrosion from dust, rain or spray.

12 VDC JACK
Use optional E-DC-5B power adapter in your car for 5 W PWR O/P.



"This HT is the first amateur radio with built-in Digital Coded Squelch (DCS) for RX and TX."

"For a radio this small and rugged, the audio is genuinely LOUD!"

"I used ADMS-1B to program my FT-10 when we went camping, and the new ARTS system to keep track of my kids on the trails!"

"Yaesu did it again!"

Military spec commercial grade HTs loaded with new features and a choice of keypad, too.

FTT-10/A16S
16-Key, CTCSS Enc/Dec, DCS Enc/Dec, Digital Voice Recorder 99 Channels

FTT-10/A16
16-Key, CTCSS Enc, DCS Enc/Dec, 30 Channels

FTT-10/A06
6-Key, CTCSS Enc, DCS Enc/Dec, 30 Channels

FTT-10/A16D
16-Key, CTCSS Enc/Dec, DCS Enc/Dec, 99 Channels

Specifications

- Frequency Coverage
  FT-10R
  2m: RX: 140-174 MHz
  TX: 144-148 MHz
  FT-40R
  70cm: RX: 420-470 MHz
  TX: 430-450 MHz
- Choice of 4 keypad options (6, 16 or Deluxe and DVRS16 Keypads)
- Auto Range Transpond System™ (ARTS™)
- MIL-STD 810
- High Audio Output
- 12 VDC Direct Input
- Alphanumeric Display
- RX/TX Battery Savers
- Digital Coded Squelch (DCS)
- Digital Voice Recording System (DVRS) w/FTT-10/A16S
- True FM for better voice clarity
- High Speed Scanning System
- 2.5 and 5 W available
- Full line of accessories

The FT-10/40R is a totally new HT concept! Built to rugged, tough military spec, commercial radio standards inside and out, it's small, powerful, feature-packed and ready to roll out in four versions!!

Four different keypads – count 'em, FOUR! First true user-choice customized HT on the market, offers a 6, and three 16 keypad selections plus 2.5 and 5 W battery choices, too! Easy for Yaesu, the electronics are in the keypad. Easy for you, they're already installed. Just pick the one that suits your HT "style"!

New technology high-efficiency speaker design provides super-loud audio. No small surprise – after all it is Yaesu!

First ever, amateur HT rated MIL-STD 810! What else could you hope for? This, maybe. Dual Watch – see two frequencies displayed simultaneously in the display. No other single band HT has this feature. Another Yaesu exclusive, the Auto Range Transpond System™ (ARTS™) alerts you visually and audibly when a companion HT is out of simplex range. Most radio functions, are controlled by the Top Notch™, the neatly placed knob on the HT. This minimizes complex key sequences. Only Yaesu has this. Digital Coded Squelch (DCS) – for convenient semi-private operation. Digital Voice Recording System (DVRS) – records voice messages for playback, and received messages. And, of course Omni-Glow™ display, because you won't be able to put this one down!

The FT-10/40R is a military-tough, commercial-quality force in a small package. Exactly what you've come to expect from Yaesu! Better get one now, before the dealer sells out!

FT-51R
Dual Band with Windows Spectrum Scope™, Alphanumeric, Scrolling Menu, Battery Voltage Display. 2 or 5 W. World's smallest dual band HT!

FT-11/41R
Slim, trim and powerful! Alphanumeric, Compact Battery Design, Up/Down Thumb Control, RX/TX Battery Savers. 2 or 5 W Available.

YAESU
Performance without compromise.℠

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ONLY HT PROGRAM KIT AVAILABLE

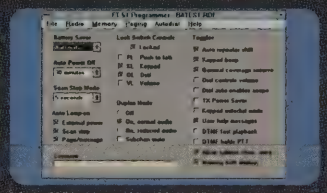
Computer Program Software, Mobile DC Adapter, Handhelds **FT-51R FT-11/41R**

The leader in Advanced HT Technology!

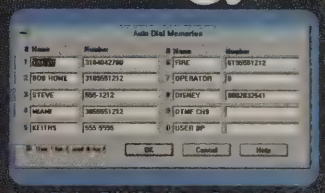
"Computer programming my Yaesu HT is fast! Point...click. Point...click."

"I created a File with the frequencies, CTCSS tones and so forth for each city I visit. Also, with the E-DC-12 adapter I can operate mobile in just a few seconds."

"Yaesu did it again!"



Main Window – Use Main Window to customize your HT. For example, the Auto Repeater Shift and Keypad Beep Tone can be selected "on" or "off". When scanning, the Display Lamp can be programmed to light up when a Busy Channel is found.



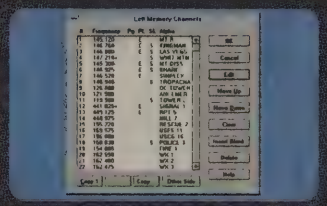
Auto Dialer Edit Window – Programming the Auto Dialer is easy. Type in names, phone numbers and in less than a minute, all DTMF Auto dial Slots are programmed.

Only Yaesu lets you program with the ADMS-1B Windows™ software or keypad.

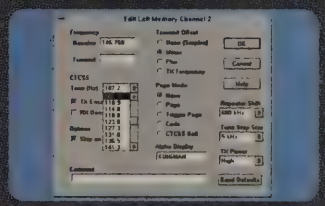
Unlock all the features of your FT-51R and FT-11/41R HTs, with a simple "point and click", easy programming of these dual band and 2-meter HTs, is yours. And, there's a Programmer Help window for each radio. Use ADMS-1B to download from HT to PC, then clone the information to another FT-51R or FT-11/41R HT instantly! Create memory Files for each city you visit then load and go! Affordable for everyone, ADMS-1B Windows™ software is a neat little package that will change your HT use forever.

If you prefer conventional programming, it's always straightforward and practical with Yaesu. The FT-51R and FT-11/41R are no exceptions! Enjoy exploring each feature-packed HT from the keypad, as you make these radios uniquely "yours".

ADMS-1B Windows™ Software Kit
3.5 Floppy Disc and Programming Cable with DB-25 Connector.



Memory Listing Window – Left and Right Memory Channels can be displayed independently. View up to 22 memory channels in a single window. Frequency, CTCSS, Encode/Decode, Scan Skips, and Alpha Names are displayed for quick and easy changes.



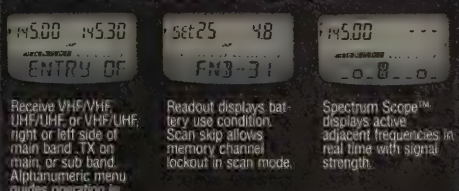
Memory Channel Edit Window – Each Memory Channel has a detailed window. With a simple click of the mouse, program the following for each memory: Frequency, Alpha Name, Repeater Offset, CTCSS, Power Level, Channel Step Size, and more!

E-DC-12 Mobile DC Adapter

New optional E-DC-12 Mobile DC Adapter slides onto the bottom of the FT-51R and FT-11/41R to provide direct 5 Watt power output ,and trickle charge the battery simultaneously. Go mobile with this quick-mount, easy to use, Yaesu "exclusive"!

The First Dual Band HT with Windows!

The FT-51R is the most high-tech, state-of-the-art, example of HT technology made today. Easy to use, too. So easy, you won't need an operating manual. Exclusive, scrolling instruction menu in the large, backlit display, guides you through total operation. Other new features are exciting, too. Spectrum Scope™, for continuous real time frequency activity scanning in VFO, or in 8 user-choice memories. A digital battery voltage display, five power output levels, Smart Mute™, two VFOs on both bands and the largest backlit dual band keypad. All of this in 2 and 5 Watt versions in the world's smallest dual band HT radio!



Receive VHF/VHF, UHF/UHF, or VHF/UHF, right or left side of main band .TX on main, or sub band. Alphanumeric menu guides operation in display bottom.

Readout displays battery use condition. Scan skip allows memory channel lockout in scan mode.

Spectrum Scope™ displays active adjacent frequencies in real time with signal strength.

World's smallest size HT with full sized keypad measures only: 4"Hx2-1/4" W x 1"D.

NEW! Alphanumeric Display Full function LCD combines letters and numbers!

NEW! Up/Down Thumb Control with Volume and Squelch Bar Graph. Back lit, too!

NEW! Compact Battery Design 4.8V gives you 1.5 Watts. A first for amateur radio!

Size is reduced, but not the quality or number of features. A full-sized keypad makes programming simpler. Alphanumeric capability to let you customize your radio. Convenient Up/Down thumb control for Volume and Squelch speeds operation. Famous back-lit keypad for easier night viewing. Compact battery design, also available in 5 watts, keeps radio slim and trim. Small in size, not in performance!

5 Watt Version Available Now!

Specifications

- Frequency Coverage:
  2 m: RX: 110-180 MHz
  TX: 144-148 MHz
  70 cm: RX: 420-470 MHz
  TX: 430-450 MHz
- 120 Memory Channels (80 w/Alphanumeric)
- Spectrum Scope™ LCD Display
- Scrolling User Help Menu
- 8 Character Alphanumeric Display
- Up/Down Volume/Squelch Controls & Display
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive (110-136 MHz)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- RX/TX Battery Savers Built-in
- Scanning Light System (SLS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- Selectable Sub-Band TX Mute
- Automatic Power Off (APO)
- User Selectable Lock Functions w/ 15 combinations
- Built-in CTCSS Encode/Decode
- 5 Selectable Power Output Levels
- Message System with CW ID
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in

Accessories:
Consult your local dealer.

Specifications

- Frequency Coverage:
  FT-11R
  2 m: RX: 110-180 MHz
  TX: 144-148 MHz
  FT-41R
  70 cm: RX: 420-470 MHz
  TX: 430-450 MHz
- Selectable Alphanumeric Display
- Compact Battery Design
  4.8V produces 1.5 Watts
  9.6V produces full 5 Watts*
- 150 Memory Channels (75 w/Alphanumeric)
- AM Aircraft Receive (110-136 MHz)
- Small Size:
  4" H x 2-1/4" W x 1" D
- RX/TX Battery Savers Built-in
- MOS FET Power Module
- Backlit DTMF Keypad and Display
- Backlit Up/Down Volume/Squelch Controls
- DTMF Paging/Coded Squelch
- Automatic Power Off (APO)

Accessories:
Consult your local dealer.
*FT-41R, 3.5 Watts

YAESU

Performance without compromise.℠

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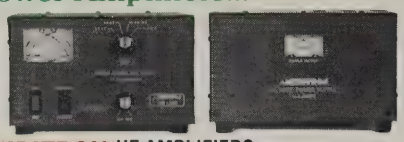
Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. Windows is a registered trademark of Microsoft Corporation.

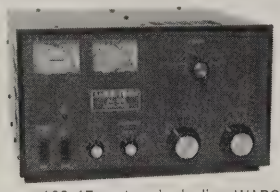
Power Amplifiers...



AMERITRON HF AMPLIFIERS

▶**ALS-600** No tune, solid-state FET linear with continuous coverage 1.5–22MHz; 10/12M with easy-to-install optional kit*. 100W drive for 600W PEP SSB, 500W CW output. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, front panel ALC control. Transmit, ALC, SWR LED indicators. Includes separate 110/220V power supply. Both units are 6"h x 9½"w x 12"d, 48 lbs (total)..... **$1099**

▶**ALS-500M** No tune, solid-state FET linear. Ideal for mobile. Continuous coverage 1.5–22MHz; 10/12M with optional kit*. Four 2SCC2879's deliver 500W PEP SSB, 400W CW with <100W drive. Illuminated Cross-Needle SWR/Wattmeter. SWR and overload protection, remote ON/OFF control. Requires 13.8VDC–80A peak for PA, and 12-15VDC–4A for control/bias. 3½"h x 9"w x 15"d, 7 lbs .. **$679.95**



▶**AL-80B** Covers 160-15 meters including WARC and MARS; bands. Modifiable for 10/12 meters*. Single 3-500Z; 85W drive – 1KW PEP SSB and 850W CW output. Dual illuminated cross-needle meters, QSK compatible.Built-in 110/220V supply. 14"w x 8"h x 15½"d, 52 lb **$1069**

AL-82
AL-1200
AL-1500
similar in appearance

▶**AL-82** Full legal output! Covers 160-12M; owner modifiable for 10M*.Uses two Eimac 3-500Z tubes and separate CW/RTTY or SSB bias settings. 100W drive – 1500W continuous output. Built-in power supply with Hypersil® transformer, 220V–15A. 10"h x 17"w x 18"d, 76 lbs..... **$1769**

▶**AL-1200** Full legal output! Covers all ham bands 1.8–21MHz + WARC bands; owner modifiable for 10M*. Single Eimac 3CX-1200A7 ceramic tube requires 100W drive for 1500W output. Heavy silver-plated tank components, built-in heavy-duty power supply with Hypersil® transformer, 220V–15A. 10"h x 17"w x 18"d, 83 lbs **$1849**

▶**AL-1500** Full legal output! Covers 160-12M; owner modifiable for 10 meters. Uses a single Eimac 8877 ceramic tube to deliver 1500W+ output with only 65W drive. Heavy-duty built-in power supply with Hypersil® transformer, 220V–15A. 10"h x 17"w x 18"d, 77 lbs. **$2269**

AL-800/800H

AL-811/811H

▶*New!* **AL-800** Covers 160-12M; owner modifiable for 10M* Uses single 3CX800A7 tube , 1200 watts output **$1429.00**

▶*New!* **AL-800H** Covers 160-12M; owner modifiable for 10M* Uses two 3CX800A7 tubes, 1500 watts output **$2059.00**

▶**AL-811** Low cost Desktop linear! Covers 160-12M; owner modifiable for 10M* Uses three 811A tubes with tuned input to deliver 600W PEP SSB/500W CW output with 75W drive. Vernier drive plate tuning, illuminated grid and plate voltage/current meters, adjustable ALC. Built-in 110/220V power supply. 16"d x 13¾"w x 8"h, 40 lbs **$589.95**

▶**AL-811H** Similar to AL-811, but uses four 811A tubes for 800W PEP SSB output with 75W input **$719.95**

IC-2KL

IC-4KL

ICOM HF AMPS

▶**IC-2KL** Solid-state linear amplifier. Covers 160–15M. 50 to 80W for 600W PEP SSB/500W CW output. Separate RF and power supply decks. Automatic band switching operation when using with an ICOM transceiver. 110V–20A (220V with modification). Both units are: 4½"h x 9½"h x 15½"d, 45 lbs (total) ..... **CALL**

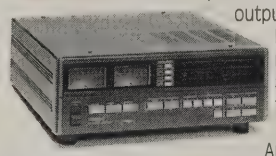
▶**ICOM IC-4KL** Solid-state linear with separate control and RF units. Covers 160–12M. Four 8 transistor modules, 100W drive – 1000W output Built-in automatic antenna tuner with memory, QSK full-break-in CW. Dual meters for SWR, final amp current and temperature, and output. Automatic operation with ICOM xcvrs. 110V or 220V. Controller: 5¾"h x 7¾"w x 13½"d, 66 lbs. Amp/Ps: 11¾"h x 16¾"w x 18"d, 79 lbs..... **CALL**

VECTRONICS HF AMPLIFIER

▶**HF-600QSK** 1.2 KW desktop linear. Covers 160–15M including WARC and MARS; user modifiable for 12 and 10M*. Class AB2 grounded grid circuit,3-500Z zero-bias triode. Tuned input, 60W (minimum) drive for 800W output-continuous duty SSB, 50% other modes. Cross needle metering system, adjustable ALC, vernier tuning and loading, high speed dual vacuum relay system for CW, AMTOR, RTTY. 7½"h x 14"w x 16½"d, 35 lbs **$1595**

YAESU HF AMPLIFIER

▶**FL-7000** 160–12 meter solid-state amplifier. Built-in automatic antenna tuner and power supply. 70W drive for 600W output. Full break-in CW, HF Packet and AMTOR. Tuner memory for settings and antenna selection. Amplifier turns off and attempts to rematch if SWR exceeds 2:1. Automatic selection of four different antennas with optional unit. Automatic band change with YAESU xcvrs; 110/220V. 5"h x 15"w x 15"d, 60 lbs .... **CALL**



RF CONCEPTS VHF/UHF AMPS

Single and Duobanders 12V DC • FM/CW/SSB modes • GaAsFET preamp • Overdrive protection

Model	input	output	amps	Price
2-meters				
2-23	0.2-5W	30W @ 2W in	5	$139.95
2-315	30-50W	150-170W	25	289.95
VHF 1-60*	1W	60 @ 1W in	10	229.95
2-417	0.2-50W	170W @ 45W in	22	289.95
220MHz				
3-22	5W	20W	4	$139.95
3-211	2W	110W	22	319.95
3-112	0.2-15W	120W @10W in	12	319.95
3-312	30W	120W	22	299.95
440MHz				
4-32	3W	20W	4	$149.95
4-110	10W	100W	22	359.95
4-310	30W	100W	20	329.95
UHF-50*	3W	50W	10	269.95
Dual Band - 2m/440 MHz				
2/70*	(3W) (5W)	(30W) (20W)	6	$239.95
2/70G	(3W) (5W)	(30W) (20W)	6	259.95
2/70H*	(28W) (20W)	(200W) (125W)	40	699.95
*Denotes No Receiver Preamplifier				
***New!* Mini-AMPS**				
144 (2m)	(2W)	(30W)	6	$ 99.95
144P (2m)	(2W)	(30W)	6	119.95
440 (440)	(3W)	(20W)	6	109.95
440P (440)	(3W)	(20W)	6	129.95
(P) Denotes with Preamplifier and Receive Filter				

MIRAGE VHF/UHF AMPLIFIERS

Add a MIRAGE amplifier to your rig for 30 to 600 watts of BRUTE POWER! Models for 6 meters through 70 cm – Base, Mobile, Repeater or ATV operation. *Features:* • 12V DC • FM/SSB/CW modes • Continuous duty • 20dB GaAsFET preamp • Overdrive and High-temperature protection • Remote control capability

Model	MHz	input	out	amps	preamp	SALE
A-1015G	50-54	10W	150W	23	yes	$349.95
A-1035G	50-54	10W	350W	23*	yes	589.95
B-23	144-148	2W	30W	5	no	119.95
B-23G	144-148	2W	30W	5	yes	154.95
B-215G	144-148	2W	150W	20	yes	339.95
B-108G	144-148	10W	80W	12	yes	204.95
B-1016G	144-148	10W	160W	25	yes	339.95
B-1030G	144-148	10W	300W	48	yes	619.95
B-1060G	144-148	10W	600W	52*	yes	989.95
B-2516G	144-148	30W	160W	25	yes	269.95
B-2530G	144-148	30W	300W	48	yes	619.95
B-2560G	144-148	25W	600W	52*	yes	989.95
B-5016G	144-148	50W	160W	24	yes	269.95
B-5030G	144-148	50W	300W	48	yes	599.95
B-5060G	144-148	50W	600W	45*	yes	989.95
C-22	222-225	2W	20W	5	no	$119.95
C-22G	222-225	2W	20W	5	yes	154.95
C-211G	222-225	2W	110W	20	yes	299.95
C-106G	222-225	10W	60W	12	yes	214.95
C-1012G	222-225	10W	120W	5	yes	299.95
C-1022G	222-225	10W	220W	20*	yes	589.95
C-2512G	222-225	30W	120W	20	yes	289.95
C-2522G	222-225	30W	200W	42	yes	589.95
C-5012G	222-225	50W	120W	20	yes	299.95
C-5022G	222-225	50W	240W	42	yes	569.95
D-15N	425-450	2W	15W	3	no	$169.95
D-26N	430-450	2W	60W	12	no	244.95
D-1010N	430-450	10W	100W	15	no	354.95
D-3010N	430-450	30W	100W	20	no	329.95
D-100-ATVN	430ATV	1W	52W	20	no	369.95
D-1010ATVN	430ATV	10W	100W	20	no	369.95

* at 28VDC **N** denotes Type-N connectors

RC-1 Remote Control Head • for all Mirage amplifiers except the B-23S, B-23G, C-22G and D-26N. **$45.00**

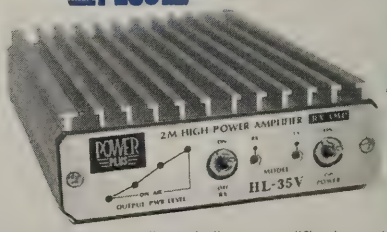
RMS VHF AMPLIFIER

▶ **PA-546** for the 140 to 155MHz range. Increases 1 to 3W FM/AM portables to 20 to 40W output. Input power is 0.35 to 5W, output is 45W maximum. Requires 12-15VDC @ 8A. 1½"h x 4¼"w x 4½"d, 14.5 oz. lbs..... **$99.95**

RF Limited POWER PLUS

HL-35V 2 METER ALL MODE LINEAR AMPLIFIER

NOW ALL MODE!



FM & SSB

This 144-148 MHz all-mode linear amplifier has a 13dB gain, switchable GaAS FET receive preamplifier and a low noise filter from inproved signal-to-noise ratios. It's the perfect combination for performance, dependability, and price. 0.5-5W input for 10-35W output– ideal for 2M HTs. Requires 13.8V DC @ 4.5 amps. 1 ⅜"h x 4"w x 6¾ "d, 1.25 lbs..... **$99.95**

*A properly licensed amateur may modify an amplifier for 10 meters. Please contact the manufacturer for details.

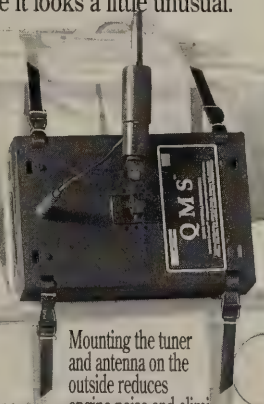
OWN THE WORLD'S BEST FOUR-WHEEL-DRIVE BASE STATION

Add a QMS Antenna Tuner System to your SSB.

$895.00

The QMS is an SGC Smartuner® automatic antenna coupler, an SG-303 extended full-range antenna, and the special exterior—waterproof— mounting package, all in one.

The QMS is that large box strapped to the side. We admit, at first glance it looks a little unusual. But once you use it, you'll find an almost unbelievable jump in reception and transmitting range (3-20 db). The QMS makes a typical HF-SSB perform like it's never performed before. Match it with a cutting edge SGC HF-SSB and it will blast holes through major mountain ranges and probably some laws of physics. Power and focus are everything in HF-SSB ham rigs. Buy this and own the best base station on–or off–the road.



Mounting the tuner and antenna on the outside reduces engine noise and eliminates power-draining antenna wire runs between the antenna and tuner.

QMS. It's the look of focused power.

LEARN TO LOVE THE LOOK

SMARTUNER INSIDE

SGC

NO COMPROMISE COMMUNICATIONS

AMERICAN TECHNOLOGICAL LEADERSHIP MADE IN USA

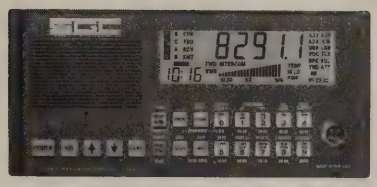
1-800-259-7331

The SGC Building P.O. Box 3526 Bellevue, Washington 98009 USA (206) 746-6310 Fax: (206) 746-6384

YOU WANT AN HF-SSB.

YOU WANT A HAM RIG.

THIS IS WHAT YOU WANT.



This is it. The SG-2000 HF-SSB. With 644 ITU and ham frequencies –including SITOR telex channels– permanently etched into memory. Plus 100 user programmable frequencies and easy Weather-fax connections. A real *powerhouse* that produces a full 150 watts. The SG-2000 HF-SSB. Afloat or ashore, on the job or on the road, this is what you want. Call us.

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(206) 746-6310 Fax: (206) 746-6384

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BUY SMART

SG-230 Smartuner®

Antenna Coupler

SSB, AM, CW & DATA

You can't buy a smarter tuner than this. An automatic antenna coupler so intelligent it precisely tunes any length antenna –8 to 80 ft–in the HF band.

The Smartuner® automatically evaluates and switches 64 input and 32 output capacitance combinations, plus 256 inductance combinations in a "pi" network. The amazing result is over a half-million different ways to ensure a perfect match for your transceiver. And the most intelligent feature of all is that the Smartuner remembers the chosen frequency and tuning values, and will automatically reselect those values –in less than 10 ms, each time you transmit on that frequency.

The SG-230 Smartuner.® Buy smart.

MICROPROCESSOR CONTROLLED • NON-VOLATILE MEMORY • WATERPROOF B.I.T.E. INDICATOR • 1.8 TO 30 MHZ RANGE • 10 TO 150 WATTS INPUT POWER 10mS RETUNING TIME • 8 to 80 ft. ANTENNA (all types)

AMERICAN TECHNOLOGICAL LEADERSHIP MADE IN USA

SGC

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POWERTALK™

Stunning HF-SSB Receive Clarity With SGC DSP.

With SGC's new PowerTalk™, you'll intercept weak HF signals, increase signal clarity and eliminate unwanted noise. You'll hear SSB signals clearer and easier than ever before. PowerTalk™ combines the advanced receiver technology of SGC's exclusive ADSP™ (Automatic Digital Signal Processing) and SNS™ (Signal Noise Subtraction). Fast audio *and* visual tuning—a DSP command center with a high performance spinner knob and bright LED indicators. Plus all the outstanding features of the popular SG-2000: 644 ITU and ham frequencies, programmable memory, large LCD display and 150 watts of power out. PowerTalk™ is a true HF-SSB Power Tool. We have all the details. Call us *and hear more.*

SGC

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AMERICAN TECHNOLOGICAL LEADERSHIP MADE IN USA

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(206) 746-6310 Fax: (206) 746-6384

MFJ TUNERS, SWITCHES, DUMMY LOADS & METERS

See Price List and Index for other MFJ models ...

▶MFJ-16010 Random Wire Tuner *(top)* • Covers 1.8–30 MHz continously, and handles 200W PEP. Lets you operate all bands anywhere, from apartment, motel, camping, etc. with any transceiver using a random length wire.antenna. 2w" x 3"h x 4"d..... **$39.95**

▶MFJ-901B Versa Tuner • Covers 1.8–30 MHz continuously, and handles 200W PEP. Matches coaxial cable, random length wires and balanced lines (built-in 4:1 balun). Very popular for use between a transceiver and a final amplifier for proper matching and full drive, or as a mobile antenna tuner. The smallest Versa Tuner, 5"w x 2"h x 6''d..... **$69.95**

▶MFJ-945D Mobile Tuner • Covers 1.8–30 MHz and handles 300W PEP. Extends mobile antenna bandwidth and eliminates having to frequently stop, get out, and adjust your whip when making frequency changes. Matches coax cable only, has built-in cross-needle SWR bridge and wattmeter with 50/300 and 5/30W ranges. 8"w x 2"h x 6"d **$89.95**

▶MFJ-941E Versa Tuner II • Covers 1.8–30 MHz and handles 300W PEP. Matches everything! – coax fed dipoles, vees, whips, verticals, beams, random wires and balanced lines (built-in 4:1 balun). Built-in lighted Cross-Needle SWR/Power meter with 300/50W and 30/5W ranges. Eight position antenna switch to select two coax lines (direct or thru tuner), random wire/balanced line, or external dummy load. 10⅝"w x 2⅞"h x 7"d... **$99.95**

▶MFJ-948 Deluxe Tuner • Covers 1.8–30 MHz and handles 300W PEP. Has all features of MFJ-941E, plus it has a larger lighted peak reading Cross-Needle SWR/Power meter with 300/50W & 30/5W ranges, and lamp switch **$119.95**

▶MFJ-949E Deluxe Versa Tuner II • Has the same power, tuning, and switching capability as MFJ-941E described above. In addition, it has a lighted peak reading Cross-Needle SWR/Wattmeter, and a built-in 300W 50 Ω dummy load. 10⅝"w x 2⅞"h x 7"d. **$129.95**

▶MFJ-962C Versa Tuner III • Covers 1.8–30 MHz and handles 1.5KW PEP. Matches coax, random wire or balanced line (built-in 4:1 balun). Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges. Six position switch for 2 coax lines (direct or thru tuner), random wire and balanced lines. 10¾"w x 4½"h x 15"d **$229.95**

▶MFJ-986 Differential-T Tuner™ • Covers 1.8–30 MHz, handles 3KW PEP, tunes most antennas. Features a broadband T-network with roller inductor and differential capacitor. Lighted peak/average reading Cross-Needle SWR/Wattmeter with 200/50W and 2000/500W ranges. inductor spinner knob with 3-digit turns counter, 6-position antenna switch and external dummy load switches, 4:1 balun. 10¾"w x 4½"h x 15"d **$269.95**

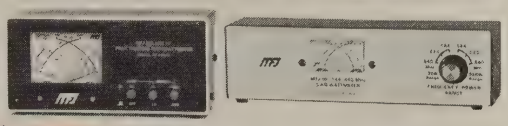
▶MFJ-989C Versa Tuner V • *Heavy-Duty!* Covers 1.8–30 MHz, handles 3KW PEP, matches everything! – coax fed antennas, random length wires, and balanced lines. Features a roller inductor with spinner knob and 3-digit turns counter. Lighted peak/average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges, 50Ω- 300 watt dummy load, 4:1 balun, 6 position antenna switch, and tilt bail. 10¾"w x 4½"h x 15"d **$299.95**

▶MFJ-259 HF/VHF SWR analyzer with RF Resistance Meter Covers 1.8-170MHz. Has a built-in 10-digit LCD frequency counter and vernier tuning. Automatic!, just connect antenna, set analyzer to frequency and read SWR directly. Monitor SWR changes as you make adjustments. Conveniently measures RF feedpoint resistance up to 500Ω at minimum SWR. Separate BNC input allows use as a frequency counter. Accurate, 1 ppm 10MHz crystal time base; .01, .1, 1 and 10 sec. gate times. Uses 6 AA cells or 110V AC with MFJ-1312B adapter. 4"w x 2½" x 6¾" **$219.95**

▶MFJ-29B Carrying pouch for 259 with window and control knob holes **$24.95**

▶MFJ-66 Dip meter adapter for MFJ-249/259, Two coils for coverage of 1.8–30MHz and 30–170 MHz **$19.95**

▶MFJ-812B VHF 2 meter/220MHz SWR/Wattmeter Forward and reflected power (3/300W), and SWR. Reads SWR from 14–220MHz, and FS. 4½"w x 2¼"h x 3"d ...**$29.95**



▶MFJ-815B SWR/Wattmeter (left) Covers 1.8–30MHz. Lighted Cross-Needle meter simultaneously monitors peak/average, forward/reflected power and SWR without adjustments. Two ranges: 200W/2000W forward, and 50/500W reflected. 7¼"w x 4½"h x 3½"d. Llight requires 12VDC..... **$69.95**

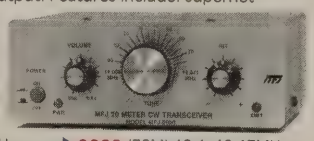
▶MFJ-817 Same as MFJ-815B but covers 144 and 440MHz. Power ranges: 200/20W forward, and 50/5W reflected... **$74.95**

▶MFJ-864 HF/VHF/UHF SWR/Wattmeter (right) Covers 1.8 to 60,144 and 440MHz. Separate directional couplers and connectors for each band. Reads forward /reflected power simultaneously on cross-needle meter with 30/300W ranges..... **$79.95**

▶MFJ-862 VHF/UHF SWR/Wattmeter Same as MFJ-864 but covers 144, 220 and 440MHz bands **$49.95**

▶MFJ-860 HF SWR/Wattmeter Same as MFJ-864 but covers 1.8 to 60 MHz..... **$39.95**

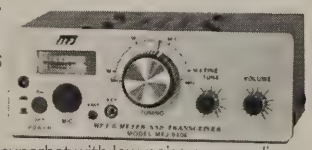
MFJ CW Transceivers Single band, CW only 5 models. Cmpact portable, up to 5 watts output. Features include: superhet receiver, speaker, vernier tuning, 8-pole crystal filter, RIT, AGC, semi/full break-in, sidetone. 12-15 VDC. 6"wx 6½"d x 2½"h



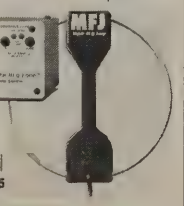
▶9015 (15M) 21–21.2 MHz
▶9017 (17M) 18.068–18.110MHz
▶9020 (20M) 14–14.075MHz
▶9030 (30M) 10.1–10.15MHz
▶9040 (40M) 7–7.15MHz
$169.95

▶MFJ-9420X 20-meter SSB Travel Radio Features 12W output, a hot receiver and potent speech processor.Smooth reduction-drive VFO tuning, S-meter. 12VDC. 2½"x 6½" x 6" **$219.95**

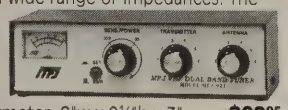
▶MFJ-9406X 6-meter SSB Adventure Radio Features 10W PEP, MFJ's Constant Current™ speech processing and VFO tuning. A crystal-mixed single conversion superhet with low-noise preamp digs into the noise floor to capture weak signals. If there's a signal there, you'll hear it! 12VDC. 2½"h x 6½"w x 6"d..... **$239.95**



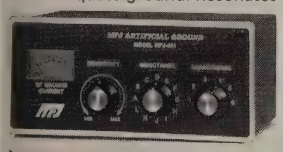
▶MFJ-1786 Hi-Q Loop Antenna Covers 10–30MHz, continuous. Tunable from controller that features an SWR/Wattmeter and auto band selection. Only 36" diameter, installs almost anywhere! Uses 50Ω coax, no separate control cable needed..... **$269.95**



▶MFJ-921 (VHF) / MFJ-924 (UHF) Tuners For base or mobile operation, matchs a wide range of impedances. The MFJ-921 covers 2 meters and 220MHz, the MFJ-924 covers 440MHz only. Both are rated at 300W PEP and feature a built-in SWR/Wattmeter. 8"w x 2½"h x 3" **$69.95**



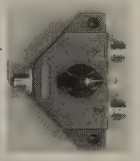
▶MFJ-931 Artificial Ground Eliminates problems caused by an inadequate ground. Resonates a random length wire to act as a tuned counterpoise. Improves efficiency and pattern. Covers 1.8–30MHz, RF ammeter tuning. 7½"w x 3½"h x 7"d. Not for coaxial fed antennas..... **$74.95**

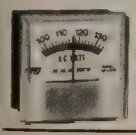


▶MFJ-1701 Antenna Switch 6 positions, 50-75Ω. Rated for 2KW PEP or 1KW CW, 1.8–30MHz. SO-239 connectors. Unused positions are grounded for lightning protection. 10"w x 3"h x 1½"d. ..**$39.95**

▶1700B Antenna/Transceiver Switch Select from 1-6 antennas and 1-6 rigs in any combination. Tuner, SWR meter, linear, etc. can be left in line to operate with any combination. 50-75Ω. Handles 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused positions aregrounded. 10"w x 3"h x 1½"d..... **$69.95**

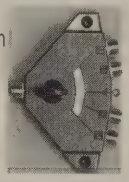
▶MFJ-1702B Antenna Switch 2 positions plus center ground, 50Ω. Rated to 500MHz with <0.2dB loss, 2.5KW PEP or 1 KW CW. >60dB isolation @ 300 MHz/>50 dB @ 450 MHz. Unused terminal grounds for lightning protection..... **$21.95**
▶MFJ-1702BN Low loss on UHF, with Type N connectors, good up to 1.1 GHz **$31.95**





▶MFJ-850 Line Voltage Monitor Plug into any AC outlet and monitor line voltage on an expanded 95–135V scale **$19.95**

▶MFJ-1704 Antenna Switch 4 positions, plus center ground. 50Ω-rated to 500MHz with <0.2dB loss. Handles 2.5KW PEP, 1KW CW, >50dB isolation @ 500MHz. Includes a replaceable lightning protection device that reduces lightning induced surges/static. **$59.95**
▶MFJ-1704N with Type N connectors .. **$69.95**



▶MFJ-250 Versaload A 50Ω oil-filled dummy load. Provides low VSWR to 400 MHz. Rated 1 KW CW or 2KW PEP for 10-minutes, with 1/2 rating for 20-minutes; 200W CW, 400W PEP continuous. 7½"h x 6⅝" dia. Includes oil ...**$49.95**
▶MFJ-250X same, without oil **$29.95**

▶DRY DUMMY LOADS An air cooled, non-inductive 50Ω resistor in a perforated metal housing. Handles full rated load for 30-seconds. with a de-rating curve up to 5-minutes.

▶MFJ-260C (HF/VHF) 300W, 1-650MHz, 2½"w x 2½"h x 7"d **$29.95.**
▶MFJ-264 (UHF) Up to 650MHz, usable to 750MHz. Rated at 1.5KW for 10-seconds, 100W for 10-minutes. 3"w x 3"h x 7"d..**$59.95**

▶MFJ-704 Low Pass Filter Reduces TVI caused by harmonics generated by 1.8-30MHz transmitters falling in the TV bands. 52Ω, low insertion loss and high harmonic attenuation. Legal power, SO-239 connectors. 3"w x 3"h x 9"d .**$39.95**

▶MFJ-1118 High Current Outlet Connects to 12VDC source and provides two pair of high current (total 30A) for HF or VHF rigs, and six pair of binding posts for other 12V station accessories. Has built-in voltmeter, switch and fuses. ... **$69.95**

▶MFJ-1116 DC Power Outlet Connects to 12VDC source and provides 8 HD-5 5-way binding posts for powering multiple items. Built-in voltmeter, switch and fuse. RF bypassed, outlets spaced for banana jacks 13½"w x 2¾ "h x 2½ "d...**$44.95**

▶MFJ-1112 as above, 5 posts, no meter or switch **$29.95**

MFJ-949E *Deluxe* 300 Watt Tuner

More hams use MFJ-949's than any other tuner in the world! Why settle for an imitation when you can have the real thing?

In Stock at AES stores

AES's PRICE
MFJ-949E
$129.95

Includes FREE AC adapter for meter light

More hams use MFJ-949's than any other antenna tuner in the world!

Why? Because the world's leading tuner has *earned* a worldwide reputation for being able to match just about anything.

MFJ-949's have been highly refined and have years of *proven* reliability.

Every MFJ-949E comes with . . . MFJ's famous one year *No Matter What*™ unconditional guarantee . . . first-rate performance . . . unbeatable quality . . . the best tuner value in ham radio -- *all from the world's most trusted name in antenna tuners.*

Now the latest MFJ-949E gives you even more features and more value than ever at a new lower price.

Why take chances with an imitation when you can have the *real thing* from the world's most trusted name in antenna tuners.

More reasons why more hams use MFJ-949's than any other antenna tuner in the world . . .

Full 1.8-30 MHz Operation

1000 volt tuning capacitors, extra heavy duty inductor switch, Teflon® insulating washers and proper L/C ratio gives you arc-free no worries operation with up to 300 watts from 1.8 to 30 MHz.

Lighted Cross-Needle Meter

MFJ's lighted Cross-Needle Meter shows you SWR, forward and reflected power *simultaneously.* It reads both *peak* and average power on 300 or 30 watt ranges.

The meter is illuminated for easy reading in dim light and has an ON/OFF lamp switch. The meter lamp uses 12 VDC or 110 VAC. A *free* AC adapter is included at no extra cost.

Tunes *any* Antenna

The MFJ-949E tunes out SWR on dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave receiving antennas . . . nearly anything!

Use coax feed, random wire or balanced lines. Has oversized *heavy duty* 4:1 balun.

Super Antenna Switch

MFJ's 8 position *super* antenna switch lets you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through your MFJ-949E or direct to your transceiver.

MFJ's Cross-Needle SWR/Wattmeter is always active for monitoring forward and reflected power and SWR.

QRM-Free PreTune™

MFJ's *QRM-Free PreTune*™ lets you pre-tune your MFJ-949E off-the-air into a built-in dummy load without causing QRM.

Pre-tuning into a dummy load makes tuning your actual antenna faster and easier.

Full Size Dummy Load

The MFJ-949E has a *full size* non-inductive 50 ohm dummy load measuring 3/4 inch diameter by 5 inches. It *easily* handles 300 watts of abusive tune-up power.

You'll find it handy for tuning, testing and repairing your rig, setting power level, adjusting your mic gain and more.

Watchout for cheap midget size dummy loads that changes resistance as it heats up -- marginal ones could burn up your transceiver.

Custom Inductor Switch

The inductor switch is the most likely component to burn up in *any* antenna tuner.

The inductor switch in the MFJ-949E was *custom* designed to withstand the extremely high RF voltages and currents that are developed in your tuner -- it's not a flimsy *plastic* switch made for small signals and wired with *tiny* gauge wire.

Superior Cabinet

Each MFJ-949E cabinet is chemically treated and has a new tough scratch-proof *vinyl* cladding -- not paint that can scratch or chip off. You won't find a tougher, longer lasting finish anywhere.

Detailed logging scales and legends are *permanently* silk screened on a *real* aluminum front panel and back panel -- it's not merely a plastic decal or glued-on paper strip that can peel off.

Superior Materials . . . *Superior* Construction

Every MFJ-949E use Teflon® insulating washers, countersunk screws for meter bracket, wing-nut for ground post, fire-retardant epoxy glass PC board (*not* canvas based), heavy .063 inch thick aluminum chassis (*not* flimsy .050 inch), heavy gauge wire used throughout (*not* small gauge), custom cabinet (*not* multi- purpose with unused holes and internal protruding screws).

No Matter What™ Guarantee

Every MFJ-949E is backed by MFJ's famous one year *No Matter What*™ unconditional guarantee. That means we will repair or replace your MFJ-949E (at our option) *no matter what* for a full year.

Others may give you a *limited* warranty on defects in material and workmanship.

But what do you do if it burns up and they say, "Sorry, your *limited* warranty does not cover that?"

Continuing Service

Only MFJ gives you a *direct* toll-free technical help line answered by *electronic technicians* who are experts in antenna tuners. We're here to help keep your MFJ product performing flawlessly -- no matter how long you own it -- just call toll-free 800-647-TECH(8324).

Why take chances?

Why take chances with an imitation when you can have the* real thing *from the most trusted name in antenna tuners?

AMETEUR ELECTRONIC SUPPLY, INC.
5710 W. Good Hope Road; Milwaukee, WI 53223

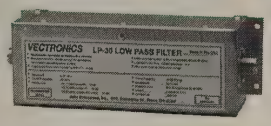
AES

Milwaukee, WI	800-558-0411
Wickliffe, OH	800-321-3594
Clearwater, FL	813-461-4267
Orlando, FL	800-327-1917
Las Vegas, NV	800-634-6227

MFJ . . . making quality affordable

VECTRONICS Ham Accessories

TVI FILTERS



▶**LP-30** TVI Filter Suppress TV interference from HF transmitters operating below 30MHz. Use between transmitter and antenna or tuner to provide up to -70dB attenuation of harmonics that fall in the TV bands. For 52Ω, up to 30MHz, rated 1500W continuous **$59.95**

▶**LP-2500** Rated for 2500W continuous RF power..**$119.95**

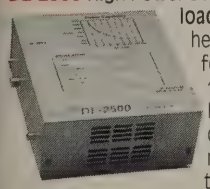
▶**HPF-1** High Pass Filter Installs between transmitter and antenna or tuner. Reduces harmonic television interference (TVI) radiated by transmitters operating below 30MHz. Low loss in the TV passband (52 to 550MHz), unique shield-breaking circuit prevents antenna cable from acting like an HF antenna. For 300Ω unbalanced system, and supplied with baluns with Type F connectors for 75Ω **$17.95**

DUMMY LOADS

▶**DL-300M** Dry Dummy load Simulates an accurate 50Ω antenna up to 150 MHz.Test your transmitter without radiating a signal on the air. Power handling curve rated at 300W for 15-seconds, down to 100W for 40 seconds. VSWR <1.3:1 at 150MHz. 5"h x 2"d x 2⅞ "h, 8 oz....**$39.95**

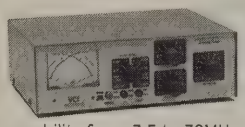
▶**DL-650M** Dry Dummy load Good up to 650MHz. Power handling curve rated at 1500W for 10-seconds, down to 100W for 10-minutes. VSWR <1.3:1 at 500MHz. **$64.95**

DL-2500 High Power Dry Dummy load A fan cooled heavy-duty load for up to 150MHz. Power handling curve rated at 2500W for 1-minute, down to 500W for 10 minutes..... **$169.95**

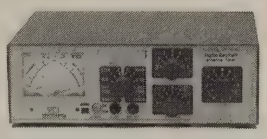


ANTENNA TUNERS

▶**VC-300M** Mobile Antenna Tuner Compact, lightweight and economical for base or mobile. Compatible with almost any antenna, including vertical, dipoles, inverted Vees, beams and mobile whips that are fed by coaxial cable, and open feeders, balanced lines, or single wires. Designed to provide matching from 1.8 to 30 MHz, and up to 300W continuous RF power capability. Dual-movement cross-needle meter simultaneously monitors RF power and SWR. Compact – 7¼"w x 3½"h x 8¾"d, 2½ lbs.....**$119.95**



▶**VC-300DLP** Antenna Tuner A quality, economical tuner designed to provide matching from 1.8 to 30 MHz, and up to 300W continuous RF power capability from 3.5 to 30MHz (150W on 1.8MHz). Built-in dummy load, dual-movement cross-needle peak or average reading meter with light. Compatible with almost any antenna including verticals, dipoles inverted Vees, beams and mobile whips that are fed by coaxial cable, and balanced lines or single wire; a 4:1 balun and six position antenna selector switch are built-in. 10¼"w x 9½"d x 3½"h, 3½ lbs.....**$144.95**



▶**VC-300D** Antenna Tuner Same function and specs as the VC-300-DLP above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph display. A LEVEL and DELAY control has been added to calibrate the display to the meter, and to vary the delay response..... **$186.95**

▶**HFT-1500** Antenna Tuner Rated 1500W (3KW PEP) 1.8 to 30MHz, 1000W (2KW PEP) on 160 and 10 meters. Cranked continuous roller inductor with a turns counter, and vernier tuning on both the antenna and input capacitors. Dual-movement cross-needle meter shows average forward and reverse power, and SWR; a 21-segment bargraph indicates peak power. For accuracy, a true RF directional coupler sensor is used for the wattmete. Includes a built-in 4:1 balun for balanced antenna feedline and six-position antenna selector switch. 5½"h x 12½"w x 12"d, 10 lbs..... **$389.95**

COMET

▶**COMET WS-1M** Window Mounting Bracket Perfect for vans and mini-trucks with pop-out windows, rental cars, etc. A multi-adjustable mounting bracket includes 11½ ft. of quality coaxial cable with gold-plated UHF connectors. Suction cups on the inside as well as outside of the bracket, along with heavy-duty construction allows for mounting gain-type antennas such as the Comet B-20 or Comet SB-5 dual-bander models, and others.....**$64.95**

▶**COMET HA-4S** HF Mobile Antenna Features switching between 4 HF bands without changing coils or plugs. Standard coils include 40, 15, 12, 10M (20M optional). Compact and lightweight, only 1 lb, 14 oz, and just 4 ft. 10 in. tall which allows for more convenient HF mounting options than conventional HF mobile antennas. Mounts on a trunk-lip style bracket such as the Comet RS-820 (shown), or a rain gutter mount such as the RS-80. High q uality construction includes a gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a hinged base, allowing a 90 degree fold-over for garaging. **$179.95**

NCG

▶Power Pocket Portable or extra power for Emergencies, Hamfests, Hiking, etc. A 12V/2A/H sealed lead-acid rechargeable battery provides extended talk time, up to 6 times longer than standard battery packs, and can be recharged to 100% anytime without the memory effect. Compact carrying case with belt loop and shoulder strap, and the entire pack weighs only 30 oz.Your radio plugs into the included female adapter socket. Complete recharge in 6 to 8 hours, with the supplied 110VAC to 12V charger. 3½"w x 1"d x 6½"h, 30 oz.....**$66.95**

NCG Light-weight boom microphone and earpiece with a dual action PTT/STL. Press the button for push-to-talk, or slide the button for slide-to-lock convenience. An alternative to cumbersome headset boom microphones. Good transmit/receive audio.

▶**MH-900P** Icom, Standard Yaesu and Alinco version.....**$39.95**

▶**MH-900PK** Kenwood version...**$39.95**

NCG Light-weight boom microphone/headset for handheld radios. Conveniently folds-up for easy storage. Boom microphone pivots to allow left or right ear speaker position. PTT switch, 36 in. cord.

▶**MP-28** Icom, Standard Yaesu and Alinco version.....**$39.95**

▶**MP-28K** Kenwood version ...**$39.95**

RANGER Communications, Inc

Two models provide loads of fun on 10 meters operating Base or Mobile for local communications as well as occasional worldwide DX. Participate in Club Events, Nets, Repeaters & Emergency Communications.

✔ **BAND:** 10 meters only; 28.0 to 29.7 MHz

✔ **MODES:** FM • SSB • CW • AM

✔ **POWER:** **RCI-2950** 25W SSB, 8W AM/FM/CW
RCI-2970 100W SSB, 50W AM/FM/CW

FEATURES: • Full band coverage • Built-in dual VFO • Ten most used frequencies can be pre-programmed for easy access • Receiver incremental tuning • Repeater offset switch • Squelch • Noise blanker • Large back-lit LCD display indicates transmit power, receive signal strength, modulation, SWR calibration and SWR • RF power output selector • PA mode • External spkr connection • 13.8VDC

RCI-2950 2⅜"h x 7⅞"w x 10⅞"d, 4¼ lbs, 5 amps **$259.95**
RCI-2970 3¾"h x 7⅞"w x 10⅜"d, 7¼ lbs, 18 amps **$369.95**

Opto Electronics

▶**R-10** FM Communications Interceptor Recieves FM signals from 30MHz to over 2GHz, without gaps. Unlike scanners that must be tuned or scanned through a fixed frequency range, the interceptor receives the entire range without tuning. A new dimension to monitoring!. Take it with with you on cruise ships, to military bases, theme parks, zoo, airports, to space shuttle launches, sporting events, car races and anywhere else two way FM communication is used. The Interceptor is completely automatic. The actual distance from which the Interceptor can detect a transmission will vary depending upon the RF Floor and the presence of other strong signals, distances of 200 to 400 feet from a 5W UHF or VHF transmitter are typical **$299.00**

▶**Scout/400** Frequency Scout Automatically finds and records frequencies in the 10MHz to 2.8GHz range, from 15 to 400 ft. away, typically. 9-digit display, 16-segment signal level bargraph. Differentiates between random noise and coherent RF transmissions. Ideal for surveillance walk-by situations; has a built-in vibrator to secretly let you know that you've found an active frequency. For drive by applications, a double beep indicates a new frequency; a single beep indicates that an already recorded frequency has been hit again. Up to 250 hits can be counted for each of 50 frequency memories. Internal battery gives more than 6 hours of operating time, a charger for one-hour rapid-charge is included. 3¾"h x 2¾"w x 1¼"d; 8½ oz.. ..... **$449.00**

PERIPHEX

POWER PACKS for Longer QSOs

These Super Packs feature short circuit protection and overcharge protection, and a 12 month warranty. These and other models available for late model ICOM Handhelds.

▶**BP-7S** 13.2V @ 1200mah..... **$65.00**
▶**BP-8S** 9.6V @ 1400mah..... **$65.00**
▶**BP-84S** 7.2V @ 1400mah **$44.00**
▶**BP-85S** 12V @ 800mah **$76.00**

See Price List for other Models.

SWR & Power Meters...

BIRD Electronic Corporation

Carrying case, dummy load, elements and connectors are optional.

Case will hold three additional elements (6) instead of dummy load as shown.

▶**43 THRULINE® Wattmeter** Measures incident and reflected power in coaxial transmission lines with 5% of full scale accuracy; insertion VSWR is less than 1.05. Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged aluminum case. Supplied with SO-239 Quick Change (QC) type connectors; optional UHF, N and BNC types available. Optional plug-in elements (see table below) provide a wide choice of frequency ranges from 2–1000MHz, with power levels up to 5000W (2–30MHz) and up to 1000W (30–1000MHz). Select one or more elements now, add others as needed. 6⅞"h x 5⅛"w x 3⅜"d, 3 lbs..... **$239.00**

▶**43P Peak Reading Wattmeter Meter** Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors and accessories. Requires two 9V batteries..... **$359.00**

▶**4431 THRULINE® Wattmeter** Same as the 43, but with a built-in variable RF signal sampler to provide an adjustable low level signal sample for counters, scopes, analyzers, etc **$421.00**

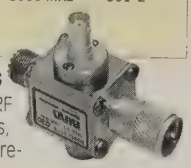
TABLE 1 Standard BIRD Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400 1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power BIRD Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		



BIRD Variable RF Signal Samplers
Stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control.

See Price List for BIRD accessory pricing ...

YAESU SWR/Power Meters

▶**YS-60** Monitors average (CW) and peak (SSB) transmitter output, and VSWR of antenna system. Covers 1.6-60MHz up to 2kW with meter ranges of 20/200/2000W. 50Ω, SO-239 connectors. Requires external 12V DC for meter lamps and internal op amplifier circuits. 4¾"w x 2¾"h x 3½"d, 1½ lbs **$129.95**

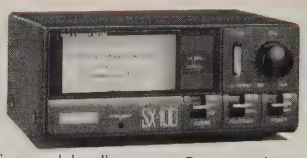
▶**YAESU YS-500 SWR/Power Meter** Similar to YS-60 above, but covers 140–525MHz, and up to 200W with meter ranges of 4/20/200W. 12V not required **$109.95**

COMET SWR/Power Meters

Three models with separate meter and RF sensor with 6 ft. long cable. Lighted, cross-needle meter with three selectable power ranges, shows forward and reflected power, and SWR simultaneously, plus indicates DC voltage from power source. 50Ω, 12VDC. 4¾"w x 3⅛"h x 1¾"d, 1 lb, 4 oz.

▶**CMX-1** 1.8–60MHz; 30, 300, 2000W ranges..... **$189.95**
▶**CMX-2** 1.8–200MHz; 20, 50, 200W ranges..... **179.95**
▶**CMX-3** 140–525MHz; 20, 50, 200W ranges..... **169.95**

DIAMOND SWR/Power Meters



Five models, all measure Power and SWR with 5–10% of full scale accuracy. Illuminated meter, sensor switch and LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.), ratings vary with frequency. All have SO-239 connectors, except the SX-1000 which has a Type-N. The SX-600 and SX-1000 are dual band. 12VDC required for displays. 6"w x 2½"h x 4"d, 2 lbs.

▶**SX-100** 1.6-60MHz, 30/300/3000W ranges..... **$149.95**
▶**SX-200** 1.8-200MHz, 5/20/200 ranges..... **109.95**
▶**SX-400** 140-525MHz, 5/20/200W ranges **129.95**
▶**SX-600** 1.8-160MHz and 140-525MHz, 5/20/200W..... **179.95**
▶**SX-1000** 1.8-160MHz and 430-1300MHz, 5/20/200W.. **249.95**

DAIWA SWR/Power Meters

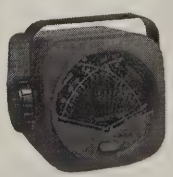
▶**DAIWA CN-101** Covers 1.8–150MHz, rated at 1500W from 1.8–60MHz and 1000W at 144MHz with 15/150/1500W RMS or PEP power ranges. Cross-needle meter shows forward/reverse power, and SWR simultaneously; ±10% full scale accuracy. SO-239 connectors. 6"w x 3"h x 3⅞"d, 1½ lbs..... **$89.95**

▶ **CN-103M** Same as CN-101, except 140 to 525MHz coverage and rated at 200W with 20/200 watt meter ranges **$99.95**

▶**DAIWA NS-660PA SWR Meter (left)** Covers 1.8–150MHz, with 30/300/3000W ranges. Cross-needle meter shows RMS or PEP forward and reverse power, and SWR simultaneously. 50Ω, SO-239 connectors. 7¼"w x 3¾"h x 5⅞"d, 2¾ lbs **$199.95**

▶**DAIWA DP-830 Digital SWR Meter (right)** Covers 1.8–150 and 149–525MHz. Fully automatic! Large LCD displays forward RMS or PEP power, and SWR by digits and bargraph, simultaneously. Power: 1.5KW (1.8–150MHz) & 150W (140–525MHz). SWR beep tones, clock functions displays 4 different times, SO-239 connectors. 5⅞" w x 2½"h x 4⅝"d, 2¼ lbs..... **$319.95**

▶**DAIWA DP-820 Digital SWR Meter** Same as DP-830, except covers 140 to 525MHz, 150W and no clock function.. **$249.95**

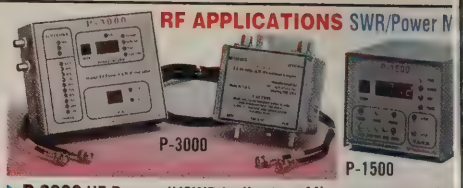


▶**DAIWA CN-410M Compact SWR and Power Meter** For mobile or base use. Covers 3.5–30MHz, rated at 150W with 15/150W forward & 50W/5W reflected power ranges. Backlighted, cross-needle meter shows forward/reverse power and SWR simultaneously, SO-239 connectors, mounting bracket. 2¾"w x 3"d x 3⅞"d, 10 oz....**$89.95**

▶**CN-460M** Same features and rating as CN-410M, except covers the 140–450MHz range..... **$89.95**

▶**CN-465M** Same features as CN-410M/460M, except covers 140 to 450MHz and rated at 75W with 15/75W forward and 5/25W reflected ranges. **$89.95**

RF APPLICATIONS SWR/Power M



▶**P-3000 HF Power/VSWR Indicator** Microprocessor ba for fast, accurate Power and VSWR readings from 1.8 to 30MHz, without adjustments or calibration.

Peak Digital Power Display • Range is 10 to 2950 watts with fo selectable parameters: Forward Power; Reflected Power; Tru Power and Volts.

VSWR Display with Alarms • Indicates VSWR from 1 to 19:1 wit no calibration required. When VSWR exceeds 3:1 an alarm LE signals on the display unit and the protection relay de-energi to disable the amplifier control circuit (if desired).

Instantaneous Power Bargraph • Auto-ranging. Ten LEDs indic 10% to 100% in 120, 100 and 2000 watt ranges. 100 millisecor response time makes tuning and SSB/CW monitoring easy.

A separate remote Directional Coupler rated at 1,500W contir ous can be located up to 6 ft. away from the display unit. 53Ω SO-239 connectors. Requires 12 VDC @ 250mA. Display: 6½"w 5¼"w x 2¼"d; Coupler: 4½"w x 3¾"h x 2¼"d. 6 lbs total. ... **$29**

▶**P-1500 Digital RF Power/V.S.W.R. Indicator** Covers 1.8 t 30MHz, rated at 1500 watts continuous. Built-in coupler. Four digit LED display, autoranging bargraph. VSWR status lights. Requires 12V DC @ 100 mA. 4"w x 3½"h x 4"d, 4 lbs **$21**

▶P-3000-P 12V adapter **$12.95** • P-1500-P 12V adapter **$1**

KENWOOD SWR/Power Meter

▶**SW-2100** Covers 1.8 to 30MHz, dual meters simultaneously display RF power up to 2kW and VSWR. Ranges: 0-200 and 0-2000W Requires 30W RF for SWR measurement. 52Ω, SO-239 connectors. 8"w x 2⅝"h x 3⅜ "d, 1.9 lbs **$15**

MIRAGE SWR/Power Meters

Four models, all measure RMS and pe forward and reverse power and SWR, directly. Negligible insertion loss. Remotable coupler, SO-239 connectors. Requires 9V battery, 9 to 13.6V DC, or AC adapter. Low battery indicator. 5¾"h x 4½"w x 5¾"d, 3½ lbs.

▶**MP-1** 1.8 to 30 MHz; 25, 200, 2000W ranges..... **$209**
▶**MP-2** 50 to 200MHz; 50, 500, 1500W ranges..... **209**
▶**MP-3** 425 to 450MHz; 5, 50, 500W ranges..... **239**
▶**MP-4** 1260 to 1300MHz; 1, 10, 100W ranges **259**

VECTRONICS SWR/Power Meters

▶**PM-30HF** Looks similar to the model shown. Measures and displays RMS or PEP forward and reflected power, and SWR simultaneously on an illuminated cross-needle meter.1.8 – 60MHz, 300/3000W ranges. 5⅜"w x 3½"h x 5¾"d, 1.2 lbs..... **$84**

▶**PM-30UV UHF/VHF SWR/Power Meter** (shown) Same features as HF but covers 144, 220 and 450MHz bands..... **$84**

VANCO *Low Cost* Meters

▶ **SWR-1 Field strength/SWR meter** • **Range:** 3.5 to 150MHz; **Impedance:** 52Ω; **SWR:** 1:1–3:1; **Accuracy:** ±5%; **Meter Sensitivity** 300uA; **Antenna:** 5" whip; **Size:** 6"h x 2"w x 2⅞"d, 14 oz..... **$19**

▶**SWR-2 SWR/Power meter** • **Frequency Range:** 1.7 to 150MHz **Impedance:** 50–52Ω; **SWR:** 1:1–3:1; **RF Power:** 0–10 and 0-100 watts; **Accuracy:** (SWR) ±5% (Power) 10%; **Meter Sensitivity:** 200 uA; **Antenna:** 5" whip; **Size:** 6"w x 2"h x 2"d, 14 oz..... **$29**

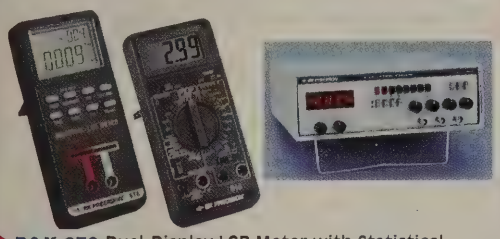
▶ **SWR-3 SWR meter** • **Frequency Range:** 1.7 to 30MHz; **Impedance:** 50–52Ω; **SWR:** 1:1–3:1; **Accuracy:** ±5%; **Meter Sensitivity:** 300 DC uA; **Dimensions:** 2½" x 3½" x 3", 6 oz. . **$14**

B&K PRECISION
MAXTEC INTERNATIONAL CORP.

▶B&K 390 Test Bench™ (left) A multi-function multimeter. with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7½" x 3½" x 1½", 17 oz. **$134.95**

▶B&K 2860 Digital Multimeter (center) Rugged construction with water resistant case. AC/DC Voltmeter AC/DC Ammeter (20A); Ohmmeter; Audible Continuity Check; Diode Test. 3½ digit, 0.8" LCD. 6⅞" x 3⁵⁄₁₆" x 1¼", 12 oz. **$84.95**

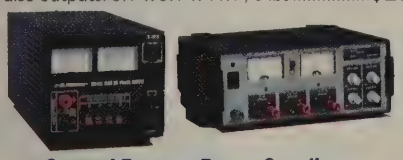
▶B&K 2704A Digital Multimeter (right) Handy for the tool kit! Measures: DCV 200mV-1000V; ACV 200mv-750V; DCand AC current to 10A; Ohms, 0.1Ω to 20MΩ; Capacitance to 20uF; and Transistor gain. 5¾ " x 3" x 1¼", 13 oz. **$49.95**



▶B&K 878 Dual-Display LCR Meter with Statistical Functions Excellent for sorting parts. Displays measured value and Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. Relative mode displays difference between the measured and reference component values. Tolerance mode "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value. Selectable, 120Hz or 1kHz. 1½" x 3½" x 7½", 14 oz. .. **$219.95**

▶B&K 815 Parts Tester (center) Tests transistors, SCRs, diodes, LEDs and batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. Big 0.8" LCD display. 6⅞" x 3⁵⁄₁₆" x 1¼", 12 oz. **$84.95**

▶B&K 4011 5 MHz Function Generator (right) Generates sine, triangle, square, pulse and ramp waveforms. TTL and CMOS Pulse outputs. 9¼" x 3¼" x 11¼", 6 lbs..... **$239.95**



General Purpose Power Supplies

Lab Quality – reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple and conservatively rated for continuous operation at maximum rating.

▶Model 1686 High Current (left) Output: 3 to 14VDC @ 2.5 to 12A. Continuous 12A duty at 13.8V DC without overheat. Reverse polarity, overload and short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Voltage and current limiting adjusments. 5½" x 5¾" x 12", 12 lbs **$169.95**

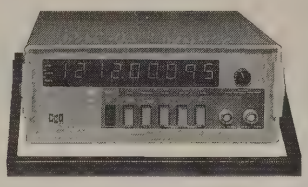
▶Model 1651 Triple Output (right) Output: Two 0 to 24 VDC @ 0.5A; One fixed 5V @ 4A, continuous. Independent tracking, adjustable current limiting. Short circuit, overload, reverse polarity protected. 3¾" x 9½" x 7½", 11 lbs **$359.95**

▶Scopes and Counters For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high accuracy over a wide range of frequencies and conditions.

See the Price List for the complete B&K listing

DIGIMAX Frequency Counters

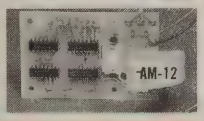
▶D-1200/D-612 Frequency Counters Ideal for solving difficult bench and field problems involving complex PLL, TV Tuner, VTR, and computer circuits. – plus, they can help to keep your QSOs on the correct frequency! Both models meet FCC land mobile, broadcast, and telecommunications requirements. 9 digit LED, 0.5" 7 segment display, leading zero suppression for error-free readings. Built-in 10 MHz, 0.1 PPM (20°-40°C) 10MHz proportional oven. When checking audio tones, the built in audio multiplier in the D-1200 will resolve 1/1000th Hz in 10 sec., 1/100Hz in 1 sec., and 1/10 Hz in 0.1 sec. The. D-612 resolves 1 Hz in 1 sec.and 1/10 Hz in 10 sec. except when using the *optional* AM-12 audio multiplier, then the resolution is the same as the D-1200. The D-1200 also has a prescale input sensitivity control – and the D-612/D-1200 includes a 1.2 GHz prescaler. Both operate from ext. 8-14.5VDC @ 200-500ma., internal 6 "C" cells, 115V with optional AC adapter or optional rechargeable battery 3¼"h x 8½"w x 9"d. • D-612 does not include carrying handle.



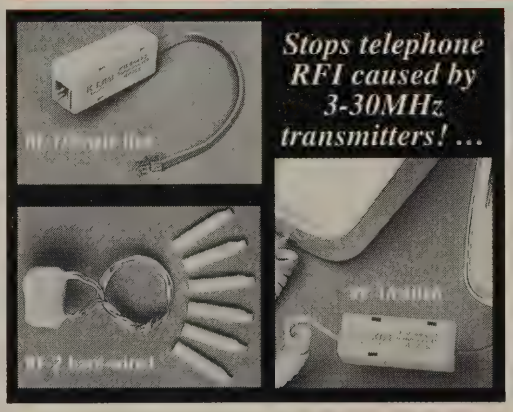
See Digimax in the Price List

▶D-500/D-510A Frequency Counters Excellent accuracy and high reliability, make these units the perfect choice for the bench, tool box, or ham shack. The D-500 covers 50Hz to 512MHz and will resolve 1 Hz to 50 MHz and 10 Hz to 500 MHz; the D510A covers 50 Hz to 1 GHz. and will resolve 10 Hz to 1 GHz. 8 digit LED, 0.5" high seven segment display, leading zero suppression for error-free readings. Contains a 1 PPM (17° to 35°C) TXCO time base. Operates from external 8-14.5V DC @100-250ma., 115V with optional AC-12 adapter or optional BAC-5 rechargeable battery pack. 1½"h x 5"w x 5¼"d.

▶Optional Accessories
AC-12 9V DC Adapter; **AM-12** 10X/100X Audio Multiplier; **AM-500X** 10X/100X Audio Multiplier; **B-12** Dry Cell Holder, switch for D-612; **BAC-12** Nicad battery Pack for D-612/D-1200; **BAC-5** Nicad Battery for D-500/D-510; **RF-500X** 250W In-line RF Sampler; **T-1200** 21" BNC Telescopic Antenna.



K-COM Telephone RF Interference Filters



Cure phone RFI in the most irritating cases even when dealing with full legal limit power output. Use any number of filters with no adverse effect on telephone performance. Comes fully assembled, with complete installation instructions.

▶RF-1 For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc.; has standard RJ-11 modular connectors **$16.95**

▶RF-1/2-line The correct filter for two-line telephone sets. Standard use or with multi-line electronic key phone systems typically found in businesses **$22.95**

▶RF-1/coiled Recommended when RFI enters through the coiled telephone cord..... **$22.95**

▶RF-2 Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring; inside phone jacks, behind wall mounted telephones, etc..... **$10.95**

We DEAL in Trade-in's ...

and are always looking for Clean, Late Model SSB & FM Gear.

Look over the Goodies in this Catalog, then use this Handy Coupon to tell us what you've got and we'll rush you our quote ... Pronto!

Looking for good Used Gear? We always have hundreds of items in stock, just CALL and let us know what you need!

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AES

OPTOELECTRONICS

AES

MADE IN THE U.S.A.

SCOUT®

The SCOUT frequency recorder is a revolutionary device which can automatically record up to 400 unique frequencies from 10MHz-1.4 GHz in the nearfield. The unit also features the new Reaction Tune function which allows the SCOUT to tune any CI-V equipped receiver, and the AOR AR8000 and AR2700 units. The Scout has a 9 digit LCD display with full annunciators, 16 segment signal strength bargraph, EL backlight, beeper, vibrator, non volatile memory, NiCad batteries with 10 hour discharge, AC adaptor, and utility software disk for downloading the memory into a PC, using the optional CX12AR converter.

SCOUT.....$449.00

OPTIONAL:

DB32 Mini Antenna.....$29.00
CC30 Carry Case.....$15.00
Spectrum CD FCC Database..... $39.00

CX12AR

The only universal converter with both CI-V and full duplex modes, a dedicated squelch status input, a dedicated software controlled tape output relay, Use for hassel-free computer control of the ICOM R9000, R7000 and R7100, as well as AOR 8000. Downloads Scout data to PC. Includes all cables and adaptors. Supported by ScanStar, ScanCat, and ScannerWear for Windows.

CX12AR.....$99.00

NEW! CUB™

Introducing the new CUB pocket sized frequency counter. The CUB is ideal for communications, surveillance, and recreational monitoring applications. From 10MHz-2.8GHz, the CUB has maximized sensitivity for detecting RF in the near- field and displaying the frequency detected. The CUB features a 9 digit LCD display for best visibility and longer battery life, 8 selectable gate times with a high speed .0001 second gate, Digital Filter that reduces false counts and random noise, and Digital Auto Capture that acts like an intelligent hold button, allowing any frequency captured to remain displayed as long as needed. Simplicity, sophistication and accuracy; Make the CUB your choice for a frequency counter.

CUB.....$149.00

INTERCEPTOR®

The R10 is a self tuning FM nearfield receiver which automatically sweeps the range of 30MHz-2GHz in less than a second. The R10 provides a new dimension in recreational monitoring, as it allows for hands free usage with no gaps in coverage, and is also an excellent unit for bug detection. The R10 signal strength bargraph, 10K/100K switchable deviation display, speaker, volume and squelch control, a skip button to unlock a transmission, 6 hour built-in NiCad batteries, AC adaptor, 100-600MHz telescoping whip antenna and earphone.

R10 INTERCEPTOR.....$299.00

OPTIONAL:

CF802 825-845MHz Filter/Amp..$149.00
N100 FM Broadcast Notch Filter .$99.00
BLP70 Low Pass Filter.....$36.00
BHP800 High Pass Filter.....$40.00
Antenna Pack 2 26MHz-1GHz.....$99.00
(includes 5 tuned Antennas)

8040

The Only Portable Battery Powered Counter With KVG .05ppm Oven !

The 8040 is a full feature, multifunction counter in a compact bench / portable design.

- •10Hz-3GHz frequency Range.
- •.005ppm OCXO Oven timebase
- •10 Digit LCD display w/ signal strength bargraph.
- •Functions: Period, Ratio, Average and Time Interval.
- •4 Dual 50 Ohm/1 Meg inputs w/ AC/ DC coupling, +/-Polarity, Trigger Level adjustment, Low Pass Filter and Attenuator
- •1Hz resolution in 1 second up to 250MHz
- •Serial Data Interface
- •Rapid Charge NiCads / 1 hour discharge
- •Includes AC adaptor
- •Serial Interface for datalogging

8040.....$999.00

OPTIONAL:

OptoLog software.....$25.00
P30 1x/10x switchable probe.....$35.00
TA100S Telescoping Whip Ant....$12.00
CB232 PC Interface Cable.....$39.00

SSB220A

The SSB220A is a general purpose counter which can also measure Single Side Band with a range of 10Hz - 3GHz. Through the use of digital synthesized technology, the SSB220A provides stable and accurate measurement of SSB in both USB and LSB carrier frequencies. The unit may also be interfaced to an older radio with a dial to provide a frequency display. The unit includes an AC adaptor and built-in RS232 serial interface.

SSB220A.....$399.00

OPTIONAL:

OCXO .05pp Oven.....$249.00
Optolog software.....$25.00
CB232 PC Interface Cable.....$39.00

You Won't Miss a Thing With SCOUT™

Reaction Tune

*Scanner not included

The SCOUT™ Has Taken Tuning Your Receiver To a New Dimension

Featuring Automatic Tuning of your AR8000 and AR2700 with the Optoelectronics Exclusive, Reaction Tune (Pat.Pend). Any frequency captured by the Scout will instantly tune the receiver. Imagine the possibilities! End the frustration of seeing two-way communications without being able to pick up the frequency on your portable scanner. Attach the Scout and AR8000/2700 to your belt and capture up to 400 frequencies and 255 hits per frequency. Or mount the Scout and AR8000/2700 in your car and cruise your way into the future of scanning. A simple interface cable will connect you to a whole new dimension of scanning.

The Scout's unique Memory Tune (Pat.Pend.) feature allows you to capture frequencies, log into memory and tune your AR8000/2700 at a later time. A distinctive double beep will inform you when the Scout has captured a new frequency, while a single beep indicates a frequency that has already been recorded. For discreet monitoring, a pager style vibrator will inform you of any hits the Scout captures.

The Scout will also Reaction Tune and Memory Tune Icom CI-V receivers: (R7000, R7100, and R9000) and (Pro 2005/6 equipped with OS456, Pro 2035 equipped with OS535). Download the Scout frequencies to a PC with the Scout Utility Disk and CX-12AR (optional), then compare them to the Spectum CD-ROM/PerCon FCC Database (optional).

Act Now!! Let the Scout Reaction Tune you into The World of Scanning

SCOUT™ $449

Features

- Automatically tunes these receivers with Reaction Tune (Pat.Pend.) CI-V receivers (ICOM's R7000, R7100, and R9000), (Pro 2005/2006 equipped with OS456, Pro 2035 equipped with OS535) or AOR models (AR2700 and AR8000).
- Records and saves 400 unique frequencies
- Records 255 hits on each frequency in memory
- Digital Filter and AutoCapture (Pat.Pend.)
- 10MHz-1.4GHz single frequency range
- View frequencies in RECALL mode
- 10 digit LCD with EL Backlight
- 16 Segment RF signal strength bargraph
- CX-12AR Computer Interface (optional)
- PC Utility Disk for downloading memory to PC
- Rapid charge NiCads with 10 hour discharge time
- Scout Spectrum CD-ROM/PerCon FCC database (optional)
- AC Adaptor/Charger
- DB 32 VHF/UHF mini-antenna shown with Scout (optional)
- Distinctive Beeper/Vibrator indicate frequency hits

At right: Scout shown with CLIPMATE™. A handy windshield mount for Scout, for quick access and visibility.

CLIPMATE™ $25.00

OPTOELECTRONICS®

5821 NE 14th Avenue • Ft. Lauderdale, FL 33334

Tel:305/ 771-2050
Fax:305/ 771-2052

All prices and specifications are subject to change without notice or obligation

MADE IN THE U.S.A.

STARTEK INTERNATIONAL INC.

U.S. MADE FREQUENCY COUNTERS

ACTUAL SIZE

FAST and CONVENIENT, RELIABLE and COMPACT describe the *STARTEK ATH™* series, *Auto Trigger & Hold* Frequency Counters.

USE to find unknown frequencies, locate RF sources, check equipment for operation and frequency calibration. Use with antenna analyzers for antenna tuning, monitor the output frequency of transmitters, signal generators and more.

POCKET SIZE for convenient portable use – internal Ni-Cad batteries and AC charger/adapter are included.

EASY to use – no complicated controls or multi-function switches.

BRIGHT red LED digits for excellent readability and reliability.

BAR GRAPH indicating signal strength, on most models.

PREAMPLIFIER circuits are built into all *ATH™* series counters for maximized – ultra high sensitivity.

5 YEAR all parts and 1 year labor limited factory warranty.

U.S. made and very affordable – prices start under $120.

Call AES®
for Prices & Ordering

For technical questions or model selection, call STARTEK Help Line 305-537-5577

Model 1350
Basic Model, 1-1300 MHZ, Hold Sw (No ATH or Bar Graph) $129. CALL

ACCESSORIES — Call For Prices

#CC-90	Soft Case for All Models
#TA-90	Telescope BNC Antenna
#TA-90-L	Telescope Elbow BNC Antenna
#RD-150	150 MHZ Rubber Duck Antenna
#RD-2750	27 & 50 MHZ Rubber Duck Antenna
#RD-450	450 MHZ Rubber Duck Antenna
#RD-800	Cellular phone band RD Antenna
#P-110	200 MHZ 1X-10X Probe
#LP-22	Low Pass, Audio Probe
#DC-10	Direct, 50 OHM Probe
#DC-5	BNC Cable to Clip Leads
#M-207-IC	Interface Cable MFJ Ant. Analyzers
#APA-9	9VDC Auto Power Adapter

See Price List or Call AES for Pricing

FEATURES

	ATH-10 CALL reg $179	ATH-15 CALL reg $235	ATH-30 CALL reg $299	ATH-50 CALL reg $339
FREQUENCY RANGE	1 MHZ - 1200 MHZ	1 MHZ - 1500 MHZ	1 MHZ - 2800 MHZ	5 HZ - 2800 MHZ
AUTO TRIGGER & HOLD	YES	YES	YES	YES
SIGNAL BAR GRAPH	NO	YES	YES	YES
LOW BATTERY IND.	NO	YES	YES	YES
ONE-SHOT & RESET	NO	OPTIONAL	YES	YES
HI-Z LOW RANGE	NO	NO	NO	YES

OPTION #HST-15 is a high accuracy, high stability, time base upgrade that can be ordered with any *ATH* ™ series model (±0.2PPM TCXO) ..... **$125** CALL

BAND PASS FILTERS EXTEND READABILITY DISTANCE. **Call For Price**

#LP-60	DC - 60 MHZ	**#BP-150**	130 - 500 MHZ
#HP-400	400 - 1500 MHZ	**#HP-800**	800 - 2000 MHZ

All instruments are true Pocket Size: 4" High x 3.5" Wide x 1" Deep, <14 cubic in. and are shipped with factory installed Ni-Cad batteries and AC charger/adapter.

Antennas and various accessories are optional.

Some Accessories Not Pictured

STARTEK INTERNATIONAL INC.
Ft. Lauderdale, Florida U.S.A.

IN STOCK AT AES® STORES...ORDER TODAY!

A-99

10 meter
Base Station Antenna

TWIN RING ADJUST-A-MATCH TUNING

The **A-99** is a half wave over a quarter wave variable mutual inductance tuned antenna for 10–17M.

It's **economical** and **easy to use!** — it features the **Solarcon** Twin Ring "Adjust-A-Match" tuning which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. Optional Ground Plane Radial Kit makes it perform even better!

Simple! — raising the rings raises the frequency and lowering the rings lowers the resonant frequency.

A real beauty! — rugged three-piece white fiberglas construction with triple plated brass fittings. It's easy it assemble and install.

A-99 Specifications

Height	17 ft. 8 in.
Sections	3
Bands	10–17 meters
Gain	3 dBi
Power Limit	2000 Watts
Radiation Angle	<20 degrees
Grounding	DC Grounded
Mounting	1-1/2" mast max.
Connector	SO-239
PRICE	**$59.95**
GPK-1 Ground Plane Radial Kit	**$39.95**

SOLARCON ANTENNAS

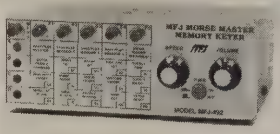
MFJ Keyers, etc

▶MFJ-422C Keyer-Paddle Combination This Keyer unit installs on top of a Bencher Iambic Paddle. If you already own a Bencher paddle, buy just the keyer unit, if not, buy the combo. Speed is 9–50 wpm, it has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic/tune or automatic modes. Keys grid block, cathode or solid state. Requires a 9V battery or AC adapter. 4⅛" x 2⅝" x 5½"d.

MFJ-422C Combo **$124.95** • MFJ-422CX Keyer only **$74.95**

▶MFJ-407C Deluxe Electronic Keyer Features dot-dash memories, self completing dots and dashes; jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone and volume, ON/OFF, tune, auto/semi-automatic. Selectable A or B-type iambic keying. Built-in speaker, requires 9V battery, or optional MFJ-1312B 110VAC adapter. 7" x 2" x 6"d..... **$64.95**

▶MFJ-401C Econo Electronic Keyer II Similar to MFJ-407C described above, but with external speed and volume controls, internal weight and tune controls. Requires a 9V battery (not included), or AC adapter..... **$49.95**



▶ MFJ-492 Menu Driven Memory Keyer No keypad, and no complex sequences to remember– just follow the menu! You can save and play messages, decrement serial #s, set speed, weight, sidetone, iambic, semi-auto, handkey, message queue, paddle command modes – turn on/off sidetone, transmitter tune, keying output on/off – select iambic A or B, reverse paddle, Morse trainer, and store starting serial number. Commands can also be keyed from the paddle. Holds 192 characters in four soft sectored message memories, and is expandable to over 8K characters in eight memories with lithium battery back-up. Front panel control for speed (5–100 WPM) and volume. Built-in sidetone speaker, direct and grid block keying output. Requires 9V battery or optional 110V AC adapter. 6½" x 2½" x 6¼"..... **$89.95**

▶MFJ-493 Like MFJ-492, but with 32K characters of memory. IBM keyboard input and QSO simulator..... **$129.95**

▶MFJ-490 Memory Keyer/Bencher Combo Nearly all features of the MFJ-492 in a compact configuration that mounts right on the Bencher iambic paddle. 5" x 3" x 5½", 9V DC **$149.95**

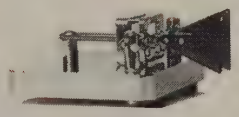
▶MFJ-490X Memory Keyer/Bencher Combo The MFJ-490 less Paddle and memory expansion kit not available..... **$99.95**

▶MFJ-451 Morse Keyboard A stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC or MFJ-1312B 110VAC adapter ... **$94.95**

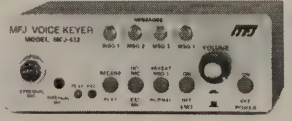
▶MFJ-452 Morse Keyboard with 16 character LCD display. Comes with keyboard..... **$119.95**

▶MFJ-557 Deluxe Code Practice Oscillator An oscillator and key mounted on a heavy non-skid base. Speaker, adjustable tone and volume controls, and earphone jack. Uses 9V battery or opt. AC adapter. 8½" x 2¼" x 3¾"..... **$24.95**

▶MFJ-564 Deluxe Iambic Paddle, chrome base **$49.95**



▶MFJ-411 Pocket-size Morse Code Tutor Take it with you and learn from zero code speed all the way to Extra Class with customized code practice. Features include Random QSO Mode, Word recognition Mode. Requires 9V battery. 3"x1⅛"x5½"..**$74.95**



▶MFJ-432 Voice Keyer Clone your voice! Store phrases like "CQ Contest this is K9KHW..."You're 59"...QTH is Wisconsin, etc. Create and store four of your own messages totaling 20 seconds. Uses 9V battery or 110 VAC with optional MFJ-1312B. 6½"w x 2½"h x 6½"d..... **$99.95**

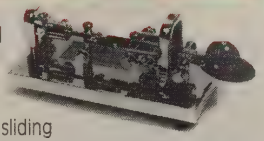
BENCHER

▶Iambic & Single Lever Paddles (left) Highest Quality, offering precise control, reliability and years of trouble-free operation. Wide-range adjustment of tension and contact point spacing. Self adjusting needle bearings, gold-plated solid silver contact points, and polished acrylic paddles. Main frame, contact post, spring posts and bearing ring are all precision machined from solid brass and chrome or gold plated for durability and rich appearance. Heavy steel base with non-skid feet in black texture, chrome or gold finish.

▶"RJ" Hand Morse Keys (right) A superb and responsive instrument which will bring new pleasure to traditional Morse keying. Features include oil impregnated sintered bearings at pivot points to impart friction-free pivoting and wobble free vertical tracking. Stainless steel locking screw allow individual adjustment for arm height, tension and contact spacing. Black "Navy" style knob with removable skirt gives a solid feel with outstanding tactile feedback, Heavy metal base available in black texture or chrome finish with anti-skid rubber feet

All models listed under BENCHER in the Price List

VIBROPLEX keys

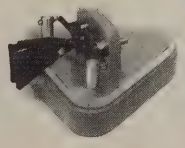


▶Original "Bug" Press the thumb piece to the right, and the vibrating bar produces one, or a string of dots – automatically. Dashes are made to the left, manually. A sliding weight adjusts the speed for 20 wpm or less. Silver contacts, non skid feet. **Standard model** has painted base and chrome top parts, **Deluxe model** has polished chrome base and top parts and fine jewel movements for smooth operation.

Standard (#110) **$139.95** • Deluxe (#105) **$174.95**

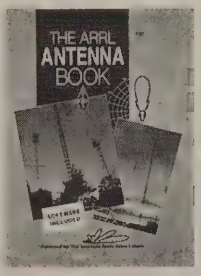
▶Original Presentation The finest quality semi-automatic key available. It offers real jewel movements and widest speed range from less than 20 to 55 wpm, plus bright chrome parts mounted on a 24-caret gold base plate ..... (#100) **$249.95**

▶VIBROKEYERS Single lever paddle (left) Initiates the automatic dots and dashes of an electronic keyer. **Dual paddle Iambic** (left) allows automatic dot/dash insertion. Standard model : gray base and chrome parts. Deluxe model: chrome base and top parts and jeweled movements. Presentation model : 24k gold plated brass plate on a polished chrome base, bright chrome top parts and jeweled movements..**See Price List**



▶BRASS RACER Iambic A solid brass Iambic paddle mounted on a polished hardwood base (#145) **$89.95**

▶EK-1 Solid brass Iambic paddle with an 8044 electronic keyer built into the hardwood base. Iambic, dot/dash insertion, adjustable speed.. (#140) **$144.95**



▶The ARRL Antenna Book The 17th edition, 736 pages – nearly 1000 illustrations! Discusses: State-of-the-art antenna and transmission line theory and construction. Antenna fundamentals, propagation, transmission lines, yagis, quads, wire antennas. Antennas for limited space, portable, mobile, VHF, UHF, microwave and space. Includes a 3-1/2" disk with quality antenna-related software for the IBM PC & combatibles ...ARR126 **$30.00**

Fast Shipment

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Advanced Electronics Applications, Inc.

▶**AEA** IsoLoop 10-30™ A compact omnidirectional HF antenna covering 10–30MHz and rated at 150W. Diameter is only 35", mounts vertically or horizontally. No rotor, tuner, ground plane, or radials are required.Highly efficient because it's tunable to the operating frequency by a step motor driven variable tuning capacitor, controlled from operating position. The special design also reduces TVI problems and attenuates out of band signals. The IsoLoop 10-30 is ideal for those with antenna restrictions. It's perfect for condos, apartments, attics, RV's. It comes fully assembled with power supply, manual controller unit, and 50 ft. of shielded control cable. Mast not included. 30 lbs **$329.95**

▶**AEA** IT-1 IsoTuner An automatic antenna tuner for the IsoLoop 10-30. It replaces the manual controller and provides quick automatic tuning to any frequency, 10 to 30MHz. Manual tuning is still available, if desired, via thumbwheel. 12-button keypad operation with audible beep; also announces completion of tuning and errors. Eight frequency memories. 10-segment LED bar monitors tuning process, indicates frequency, and displays error codes. Memory back-up, serial computer interface with PC utility software included. 12V DC, AC adapter included. 4⅛"h x 6⅜ "d x 5⅛"w, 4 lb, 4 oz **$239.95**

AEA IsoPole Omni-Directional VHF & UHF Base Station Antennas

Top performers for 144, 220 and 440 MHz IsoPoles yield the maximum gain attainable for their respective lengths, and a zero degree radiation angle which puts most of the signal right on the horizon. Exceptional decoupling results in simple tuning and a significant reduction in TVI potential and noise pick-up. Broadband- typical SWR is 1.4 to 1 or better across the entire band.

	IsoPole 144	IsoPole 220	IsoPole 440
Frequency:	135-160MHz	210-220MHz	415-465MHz
2:1 Bandwidth:	10 MHz	15 MHz	22 MHz
Power Rating:	1 KW	1 KW	1 KW
Length:	125.5"	79.25"	46"
Wind Area:	< 1ft²	< 0.75 ft²	< 0.2 ft²
Connector:	SO-239	SO-239	Type N
PRICE	$59.00	$59.00	$89.00

HOT RODS...

▶**AEA** Hot Rods High performance 1/2-wave telescoping antennas for HTs. providing gain and extend range. No ground plane required for efficiency so they actually outperform longer 5/8's. They're 20% shorter and lighter, which is more convenient, and places less stress on your HT Collapsed, Hot Rods will perform like a helical quarter-wave. Handles over 25W, useful for portable base or mobile. BNC connector ▶HR-1 (2M) • ▶HR-2 (220MHz) .....each **$24.00**

▶SWR-121 HF & VHF/UHF Graphic Antenna Analysts These compact, battery powered units measure, compute, and present a graphical display curve of SWR versus frequency on a high resolution LCD display. They show an antennas performance over it's operating range, its center frequency SWR and return loss. Range: **(HF)** 1–32MHz; **(V/U)** 120–175MHz, 200–225MHz, and 400–475MHz. Both show SWR up to 10:1. All functions, frequency, and display width adjustments are controlled via the keypad. An RS-232 interface for IBM PC-compatible computer allows remote control, remote display, and plot saving (optional AA.Com software required). Uses 8 AA alkalines (supplied) or 12-16VDC. 8"h x 4¼"w x 2¼"d, 1 lb, 10 oz.

SWR-121 HF **$349.95** • SWR-121 V/U VHF/UHF **$399.95**
AA.COM PC Software **$69.95**

▶**AEA** KK-1 Keyboard Keyer for PC Turns any standard AT compatible keyboard into a feature packed Morse machine. Short-term memory, message repeat, and message buffers make it versatile and easy to use. Total message capacity is 7,913 characters. Code practice mode allows you to choose between words commonly heard on the air and random groups of selectable length and difficulty. Speed is selectable from the keyboard or the front-panel knob. Also features a built-in iambic keyer and Farnsworth code practice..... **$189.95**

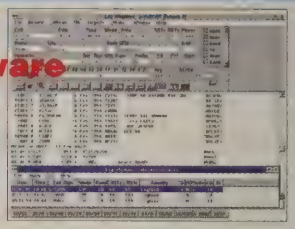
▶**AEA** KKCOM Software for KK-1 DOS editing and control for the KK-1. Compose and edit buffer contents right on the computer. Speed, sidetone pitch, serial #, and paddle sense can also be shown and edited. Save KK-1 messages, parameters, and buffers to a disk and reload late. Have different buffers for Field Day or for Contesting – just load them in when needed. Includes computer software and serial interface.....**$49.00**

▶**AEA** DM-1 Deviation Meter Measure FM transmitter deviation on 144, 220, or 440MHz. Battery powered, crystal controlled, no tuning . Two ranges allow accurate measurement of voice, data, DTMF, and sub-audible deviation on a 10-segment LED bar display. Includes outputs for an ext. digital or analog meter, and audio. 6⅛" x 4¾"d x 15⁄16"h, 1 lb **$159.95**

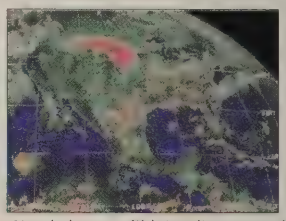
▶**AEA** RL-60 RadioLink Remotely control your ICOM, KENWOOD, and YAESU HF radios with a computer port using your handheld or mobile with touch tone capability. Easy, plug-in interface links your radio and HF base station and allows remote changing of bands, frequency, and mode **$289.95**

▶**AEA** ARE-60/HL-60 HamLink A phone controller which allows operation of your HF rig via T/T phone. Check into your favorite net or call CQ from your office, or any other location. **$239.95**

AEA Software

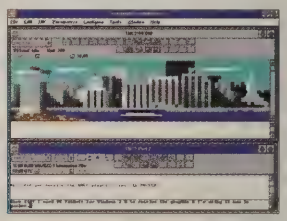


▶**AEA** Log Windows 2.0 Combines logging, rig control and DX cluster monitoring with award tracking and reporting. Features include compatibility with PC PakRAtt for Windows 2.0; browser function; rotor control capability; QSL manager; a synthesized voice announcement of DX spots, more! Interfaces with SAM, Buckmaster and QRZ. Awards:: UC-CA, US country; DXCC mixed, phone, CW, FSK, bands; CQ mixed, SSB, CW, FSK bands; WAS mixed, SSB, CW FSK, and bands.....**$89.95**



▶**AEA** FAX III Stand-alone multi-intensity gray-scale fax demodulator and display software for IBM-compatibles. Receives 16 gray-levels on satellite maps and wire photos on VGA monitors.Features include 256-color enhancement of images; and Virtual Control modules that let you control your computer controllable Lowe or ICOM receivers allowing unattended capture of images on different frequencies. Decodes CW, RTTY & NAVTEX. Tuning scope visible even when receiving images on screen. Shielded cable, general coverage HF SSB receiver & IBM-compatible PC w/640k RAM required..... **$99.95**

▶**AEA** AEA-FAXIII-900 The WeFAX reception program for the PK-900. Same features as AEA FAX III, but without demodulator because it is already built into the PK-900 .....**$75.00**



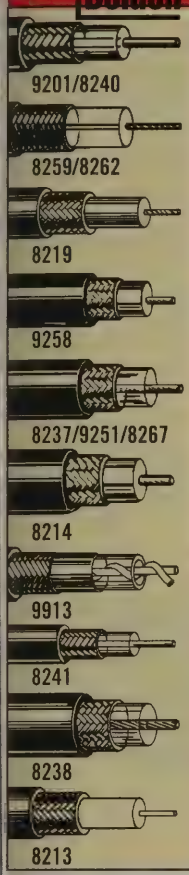
▶**AEA** PC Pakratt for Windows 2.0 New features allow you to send, receive and display ANSI graphics for PACTOR. Works with all AEA data controllers-including the new PK-12, 1200bps TNC and the PK-96, 9600/1200bps TNC. Now compatible with Log Windows version 2.0; you can run both programs at once! Run two AEA data controllers simultaneously, minimized or from the background. Separate windows for mailbox operation and QSO logging. Requires Windows 3.1 or higher and 8/91 Firmware or better in your AEA Data Controller.... **$119.95**

▶**AEA** PC Pakratt II Split-screen terminal program for all digital and WEFAX modes. Works with IBM-compatibles and all AEA data controllers including the new PK-12, 1200 bps TNC and the PK-9600/1200 bps TNC. On-screen help menus; full QSO logging features; DOS gateway. Supports PACTOR. PK-FAX B&W fax display program. DOS 3.0 or higher is required **$64.95**

▶**AEA** MacRatt 3.0 Control program for the latest Macintosh computers and all AEA data controllers. Separate windows for each TNC's parameters. MailDrop, QSO logging, and more! Run two AEA controllers at once, run all the modes the TNC is capable of. Needs 8/91 firmware or better .....**TBA**

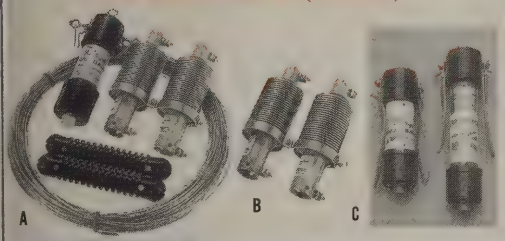
AEA UPGRADE LINE: (206) 774-1722

Belden — Coaxial Cable — *See Price List under Belden*



Belden number	RG-type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
9201	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
8240	58/U	.193	#20 solid tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	4.5 dB
8259	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
8219	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
8262	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non-contam. PVC	50	66%	4.9 dB
9258	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
8237	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	2.2 dB
8214	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
9913	8/U	.405	#9½ solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.4 dB
9251	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	52	66%	2.2 dB
8267	213/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	50	66%	2.2 dB
8241	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
8238	11/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
8213	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

UNADILLA (W2AU)



▶W2AU/W2VS 5-Band Antenna Kit (A)
Low SWR on 80 and 40 meters, resonant on 10, 15 and 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and assembly instructions. Approximately 110 ft. long, rated 2KW PEP **$85.00**

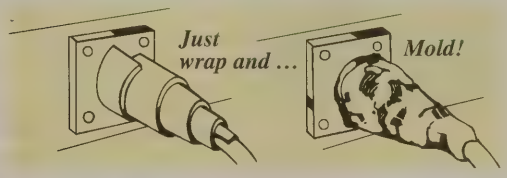
▶REYCO W2VS Antenna Traps (B)
Add these traps to your dipole for multiband operation on two to six bands. *For example:* add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20 ,40, 80 and 160 meters, add all five pairs – 33 combinations!

Selecting Traps:
List the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency.. **See Price List**

▶W2AU Ferrite Baluns (C)
Provides a smooth transition from unbalanced coaxial transmission line to balanced antennas – dipoles, quads, yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lighting protection, has convenient center eye hook for support. Usable from 1.8 to 40MHz and rated at 2KW PEP. Available in **1:1** or **4:1** ratios, or beam balun .... ea. **$24.00**

▶W2DU Non-Transformer Choke Baluns
High efficiency, 1:1 ratio. The HF model is the only one available that works on 160 meters! Handles VSWR up to 5:1 at legal limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. Models: **HF** (1.8-30MHz), **VHF** (30-250MHz), **Beam** Balun (40–10 meters)..... ea. **$26.00**

Coax Seal™ Hand Moldable Plastic for Antenna Component Protection



Coax Seal quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes – adheres tightly to vinyl and poly vinyl coax outer jackets. Simply wrap it on like you would regular tape, then mold it to any shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal by simply re-forming the same material. Non-toxic, non-contaminating • Roll, 1/2" wide x 60" **UNV 104**.....**$2.49**

STUF Dielectric Waterproofing Filler for Coaxial Connectors

Waterproofs from the inside out!

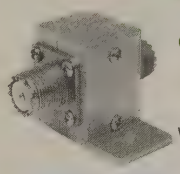
CRS STUF
$4.50
per tube

- High purity macroscopic foam, dielectrically simulates the coaxial cable core.
- No insertion loss.
- Contains no silicones, etc. to harm cable material
- Just fill connector and tighten. Filler hydraulically channels into all connector voids and ports where moisture can infiltrate, and seals.
- Non-harding, easy removal.
- Quick and easy!.
- About 4.5¢ per connection.

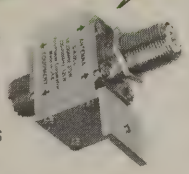
▶PENETROX A A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing, bolts at later date a breeze • 4 oz tube **PENETROX A**.....**$7.95**

PolyPhaser CORPORATION® Lightning Protection

BROADBAND HF/VHF/UHF COAXIAL PROTECTORS

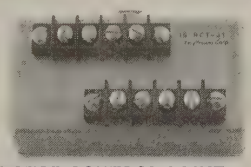


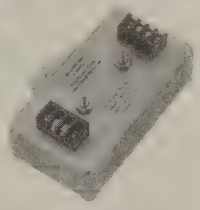
Multi-strike capability with low strike throughput energy. Aluminum enclosure. VSWR: ≤1.1 over its frequency range



▶FLANGE MOUNT (left)
IS-50UX-C0 Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W **$52.95**
IS-50UX-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W **$52.95**
IS-50NX-C2 Range: 125MHz to 1000MHz. Max.Power: VHF 375W, UHF (low) 125W, 800MHz -1 GHz 50W. Type N **$52.95**

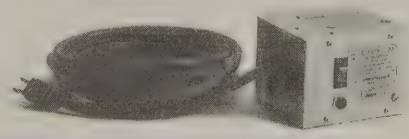
▶BULKHEAD MOUNT (right)
IS-B50LU-C0 Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W **$59.95**
IS-B50LU-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W **$59.95**
IS-B50LN-C2 Range: 125MHz - 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. Type N **$59.95**





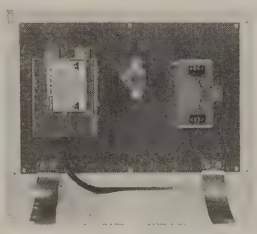
▶ROTOR CONTROL 8-LINE PROTECTOR (left)
IS-RCT Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated - faster than gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7½"h x 3¼"w x 2½"d..... **$46.95**

▶IN-LINE PHONE LINE PROTECTOR (right)
IS-SPTL Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines - handles standard ring voltages to 105Vrms. Handles surges up to 36 or 40kA without damaging let through voltages. Shielded metal enclosure. 1¾"h x 4½"w x 3¼"d **$57.95**



▶POWER LINE EXTENSION PROTECTOR
In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, circuit breaker for added protection. All aluminum grounded enclosure, 4¾ "wide. 120V AC.
IS-PLDO-120-15A with 15' cord, 120VAC @ 15A.....**$143.95**
IS-PLDO-120-20A with 6' cord, 120V AC @ 20A.....**$179.95**

▶COPPER AND ALUMINUM GROUNDING PANELS
Aluminum or copper plate .062" panels mounted on painted off-white 1/2" plywood backing. Used to mount/ground protectors and to establish a single point location for grounding equipment racks/chassis. Mounts on 16" on center, comes with (4) concrete anchors, (10) mounting screws, 10 ft. of 1-1/2" copper grounding strap (2) brass sandwich plates and joint compound. 18"w x 12"h.



AL-SPGP Aluminum single point ground panel.....**$52.95**
CU-SPGP Copper single point ground panel.....**$52.95**

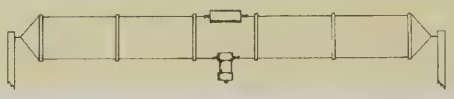
▶LOW INDUCTANCE COPPER INTERCONNECT STRAP
Copper strap has an advantage over wire when used for a ground path because it has lower inductance and cannot be fused open by lightning. For example: 1.5" strap has a lower inductance than #2.0 stranded wire. Easy to work with (cut, solder, etc.) – 6 AWG thickness (.0159"). Useable above or in-ground applications. Sold by the foot up to 450' lengths.
1.5" wide – **95¢/ft.** • 3" wide – **$2.75/ft.** • 6" wide – **$3.95/ft.**

B & W Antennas & Accessories

Multi-Band Antennas

▶**AT-110** 5-Band Trap Dipole Covers 80–10M coax feed, 110 ft. long, rated 2 KW PEP. Low VSWR on 80 and 40M; somewhat higher on 10 15 and 20M – typically 2:1 to 3:1. Wire length adjustments for tuning. Assembled..... **$84.95**

▶**AT-55** 4-Band Trap Dipole Covers 40–10M, 52Ω coax feed, 55 ft. long, rated at 500W PEP. Assembled..... **$74.95**

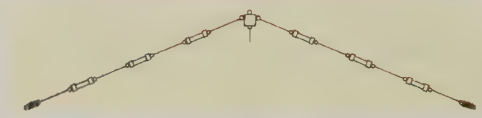


▶**AC 3.5-30** Broadband Folded Dipole Covers 3.5–30MHz continuous with VSWR less than 2:1. 52Ω coax feed, 90 ft long, rated 2KW PEP. Install as a horizontal flattop, inverted-V, or sloper for DX. Assembled and tuned..... **$179.95**

▶**BWD 1.8-30** Same as AC 3.5-30, but covers 1.8-30MHz continuous. Rated at 2KW PEP, 90 ft. long..... **$179.95**

▶**AC 1.8-30** Continuous Coverage End-fed "V" Covers 1.8–30 MHz with VSWR less than 2:1, rated 2KW PEP. Requires 80 ft. of horizontal space, or when limited, can be shorted further with only a slight loss of efficiency **$179.95**

Antennas for Limited Space



▶**AS-160** 160/80/40/20 meter Dipole or V 137 feet. long, half-the-length of a full-sized 160 meter dipole, yet provides excellent performance. It also gives excellent full-size performance on 80, 40 and 20 meters. Three sets of traps isolate a 1/2-wave on each band. For best match and bandwidth,. an antenna tuner is recommended for 160M operation with "no-tune-up" transceivers. Rated at 500W PEP **$139.95**

▶**AS-80** 80/40/20 meter Dipole or Inverted V Similar to the AS-160 above, except only two sets of traps. Where space is at a premium, this antenna can provide excellent coverage of 80 meters with a shortened overall length of only 78 ft. Low SWR on all three bands. Rated at 500 watts PEP **$109.95**

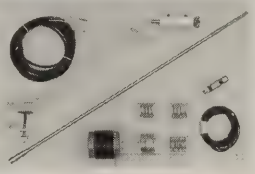
▶**AS-40** 40/20/25/10 meter Dipole or Inverted V Two sets of traps, rated at 500W PEP. Overall length is 40 ft ... **$139.95**

▶**AS-20** 20/15/10 meter Dipole or Inverted V Two sets of traps rated at 500W PEP. Overall length is 23 ft..... **$99.95**

B&W Antennas for Very Limited Space

▶**AXS-160** 160/30 meter Dipole or Inverted V One set of traps, rated at 500W PEP. Overall length is 96 ft..... **$99.95**

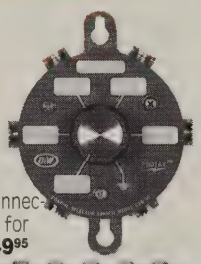
▶**AXS-80** 80/40/15 meter Dipole or Inverted V Two sets of traps, rated at 500W PEP. Overall length is 72 ft..... **$99.95**



▶**AP-10** Portable antenna Only 57" fully extended. Convenient for limited space–apartments, travel, etc. Simply change coils for 2, 6, 10, 15, 18, 20, 30, or 40M. Handles 300W PEP. Mounting bracket, all coils, 10 ft. of coax & counterpoise wire..... **$69.95**

B&W Coaxial Switches

- **52/75Ω coax • 2000W SSB**
- **Negligible insertion loss • VSWR less than 1.2:1 up to 150 MHz • Low crosstalk, -45 dB between adjacent outlets and -60dB between alternate outlets at 30 MHz**



▶**CSR-5G** 5-position, side SO-239 connectors, wall mount. Grounding position for lignting protection **$49.95**

▶**CS-6G** 6-position, locates on operating desk or mounts to wall. SO-239 connectors, grounding for protection. **$49.95**

B&W Low Pass Filter

▶**FL-10/1500** Eliminates TVI due to 1.5-30 MHz transmitter harmonics. 52Ω, 1000W rating. Sharp cutoff, high attenuation of undesired harmonics with less than 0.3 db insertion loss..... **$50.00**

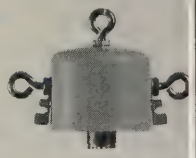
GROVE *No Tenna*

This 8 ft. antenna mounts inside a vehicle to a molding or sun visor screw and uses the entire car body as a 1-1000MHz Receive Only antenna. Ideal for city dwellers, travelers, reporters, investigators–anyone who doesn't want a visible receiving antenna on his vehicle. Clip provided for temporary connections to motel or apartment metal window frames, curtain rods and other emergency, antennas. Connectors for RCA, BNC and 3.5mm plug. GRV ANT20 **$19.95**

Van Gorden Engineering

▶ **Hi-Q Balun**
- **1:1** or **4:1** impedance ratio: For matching 52Ω unbalanced coaxial cable to 52Ω balanced antennas.
- For dipoles, yagis, inverted vees and doublets.
- Covers 3 to 40MHz, full legal power
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI and BCI problems.
- Built-in DC ground reduces noise and protects against lightning.
- Weatherproof. SO-239 connector and center support eye hook..... **$14.9**

▶ **Hi-Q Antenna Center Insulator**
- Insulator only, no internal balun
- Replaces egg-type center insulator
- Small, rugged, lightweight, weatherproof. SO-239 connector, center supporting eye hook. **$6.95**



▶ **Antenna End** insulators ..... pair **$3.95**
▶ **Dog Bone** Antenna insulator ..... each **55¢**

Dipole Antennas Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, ceramic insulators, and 100 ft. of nylon rope. Rated for full egal power. May be used in an inverted V configuration.

▶**D-80** for 80/75m, 130 ft. ▶**D-15** for 15m, 22 ft long
▶**D-40** for 40/15m, 66 ft long ▶**D-10** for 10m, 16 ft long
▶**D-20** for 20m, 33 ft. long **See Price List**

Shortened Dipoles Construction is the same and includes appropriate traps as pictured above. **See Price List**
▶**SD-80** for 75/80m, 90 ft. long **SD-40** for 40m, 45 ft. long

All-Bander Dipole Antenna Covers 160-10M with the use of an antenna tuner with balanced output. Full 135 ft. long (or less installed as an inverted V or sloper). Trim to fit small lots. Assembled with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. 2KW PEP **$29.95**

▶**SHORTY All-Bander** As above, but with loading coils to shorten the physical length to 70 ft. overall..... **$44.95**

G5RV Multiband Antenna Covers 3.5 to 30MHz, and also 1.8 MHz as a Marconi type antenna with a tuner and good ground. Consists of a 102 ft. flat top with a 31 ft. section of 300Ω KW twinlead, a transformer/coupler and 70 ft. of RG-8X mini-foam coaxial cable and connector. 2KW PEP, assembled..... **$50.00**

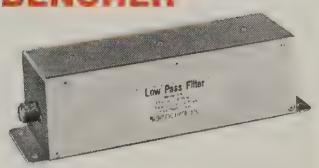
VanGorden Ladder LIne
▶100 ft. roll, 450 Ω insulated ladder line **$12.00**
▶1000 ft roll, 450 Ω insulated ladder line **99.95**

VanGorden Nylon Rope
▶NR-100 100 ft. roll, antenna guy rope **$4.49**
▶NR-1000 1000 ft roll, antenna guy rope..... **39.95**

▶*Special Connector...*
Type-N male connector for Belden 9913 coaxial cable ... **$4.95**

VanGorden Ready-Made Coax Assemblies
6 to 100 ft. lengths of quality RG-8X mini-foam or RG-213 coaxial cable with Silver-Plated–Teflon dielectric and PL-259 coaxial connectors installed..... **See Price List**

BENCHER



▶**ZA-1A** 1:1 HF Balun For 80–10 meter dipoles, vees, quads and yagis. Transforms 52Ω unbalanced coaxial line to a 52Ω balanced.Reduces feedline radiation, increases efficiency and the possibility of TVI and BCI. Designed without a ferrite core so it can accept a substantial mismatch at full legal power, allowing use of an antenna tuner. DC grounded for lightning protection. HWK hardware kit available for mounting to a 2" boom **$34.95**

▶**YA-1** Low Pass Filter Reduces the possibility of TVI caused by harmonics from 1.8 to 30MHz transmitters. Rated for 1.5KW or 5KW peak power. Greater than 80dB attenuation at 54MHz. 2½"w x 9⅛"l x 2½"h, 2 lbs..... **$54.95**

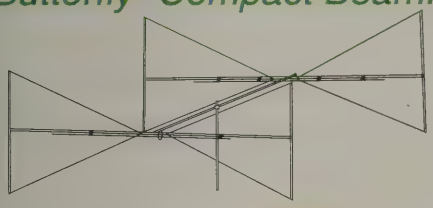
SWIECH Communications

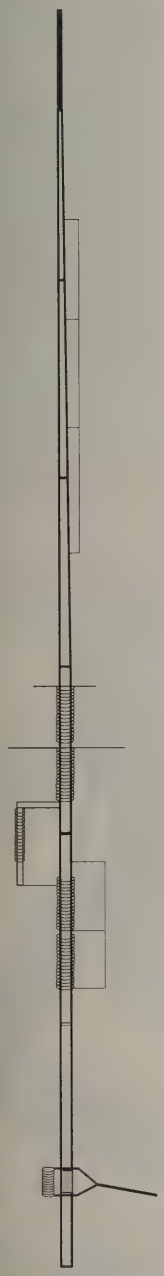
▶**COY2M3EL 2 Meter Portable Antenna** Three elements on a 3 ft boom. 4 times the Effective Radiated Power (ERP) of a dipole or J-Pole. The perfect antenna for amateurs on the go or in limited space applications. Covers the entire two meter band (144-148 MHz) and assembles in less than one-minute. Great for mountain-topping, camping, transmitter hunts, public service events and emergencies. Rated for 75W. Lightweight and black anodized, 2 lbs ..**$64.95**

John, AB9G sez...
"Don't forget to include Lightning Protection in your Antenna System!"
Check ALPHA DELTA & POLYPHASER

BUTTERNUT

Makers of the famous High Performance Butternut Verticals and the HF5B "Butterfly" Compact Beam.





HF5B
5 Band Butterfly Beam

- 5 Band Performance
- . 3 dBd gain on 20 meters
- . 5 dBd gain on 15/12/10
- Weighs only 20 pounds

Ideal where space is limited, the HF5B packs maximum performance onto a 6 foot boom with 12.5 foot elements.

With a windload of only 3 square feet, the HF5B is perfect for a lightweight mast or roof tripod. Turns easily with TV rotator..**$299.95**

HF9VX
9 Band Vertical

- 9 bands, 80 thru 6 meters
- No-radial operation with CPK counterpoise
- 26 feet tall

More efficient than trapped designs or "halfwaves", Butternut's exclusive tuning system allows more of the antenna to be active on each band, providing superior performance!..... **$249.95**

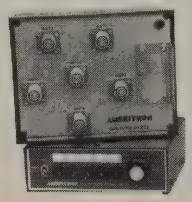
HF2V
Dual Band Vertical

- Optimized for 80 & 40
- 32 ft. tall - no guy wires!
- Adapters available for 160 or 30 meters

The action will be on 80 & 40 during the sunspot minimum - be prepared with the HF2V. The entire antenna is active on both bands for maximum performance **$189.95**

AMERITRON Coaxial Switches

RCS-4 Remote Coaxial Switch Convenient selection of up to four different HF antennas while using just one coaxial feed line, and no additional control cable. The weatherproof switch box locates out on the tower, mast or at another remote location. The control box located at your operating position, switches antennas with a control voltage routed directly through the coaxial cable. Rated for 1.8–30MHz, and handles the legal amateur power limit **$129.95**



RCS-8V Independently or simultaneously select up to five different antennas using just one coaxial feedline and a single 8-wire control cable. Internal wiring allows user to ground or float unused terminals as required. Rated to handle 5KW below 30MHz, and 1KW up to 150MHz **$139.95**

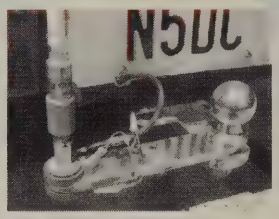
GAMBER JOHNSON

SS-100 Convenient, avoid theft! Radio slides in and out of mount instantly – without having to attach or remove cables. Power, Ground, Antenna, and Speaker leads connect and disconnect automatically. RF components are designed for a low SWR up to 500MHz. Adapts to most radios; bracket adjusts to case and can be conveniently attached above or below the radio unit **$59.95**

Super Slide **Radio Mount**

SS-101 Extra base for multiple vehicle use..... **$36.58**

DC SALES
"Tenna Hitch"



Consists of a heat treated, high strength aluminum bracket with an insulated 3/8" x 24 thread antenna mounting stud. Installs under the ball of a Class-I or Class II trailer hitch and attach the coaxial cable. Rugged!–handles the largest mobile antennas, and does not interfere with trailer towing capability. No holes to drill, all hardware supplied **$32.95**

MFJ
Short Multi-Band Verticals

MFJ-1796 1/2-wave Vertical Antenna
6 Bands – One Antenna!
Big Performance!
Ground independent– allows automatic bandswitching operation on 40, 20, 15, 10, 6 and 2 meters without a ground or radial system. Low-angle and omni-directional radiation is best for DX. Self-supporting and just 12 ft. tall with only a 24 inch footprint witch allows mounting anywhere from ground level to roof-top. E-Z to tune, handles up to 1500W PEP SSB **$179.95**

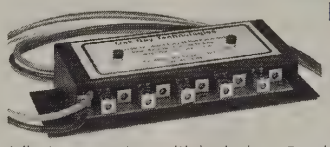
10 Bands – One Antenna!
MFJ-1798 1/2-wave Vertical Antenna Similar operation as MFJ-1796, but 10 bands. Covers 75/80, 40, 20, 15, 10, 6 and 2 meters . 20 ft. tall, E-Z to assemble . **$249.95**

OAK BAY Technologies
Accessories

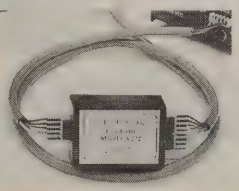
LP-11P Commercial Grade Low Pass Filter Installs in transmission line between transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within TV bands. Eleven pole Chebishev filter design covers 1.8 thru 30MHz with less than.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. Rated at1 KW RF **$69.95**

LP-50 Low Pass Filter for 1.8 thru 54MHz **$69.95**

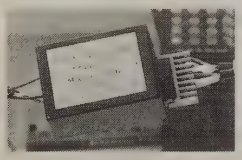
AM-101B Rubber Duck Window Mount Improve handheld performance when operating mobile by getting the RF out of the car. Great for emergencies, rental cars, etc. The custom stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 15W, dual/twin band compatible **$24.95**



PS-101 High Current 12V Power Strip Just one connection to power your source (battery, power supply, etc.) to distribute power to multiple devices. Provides 5 outputs with 2 fused at 20 Amps, and 3 at 30 Amps. Rugged screw and clamp connections. Rated for 50 Amps total current. Comes with 5 ft. of #8 ga. hook-up wire, terminal lugs and fuses **$79.95**

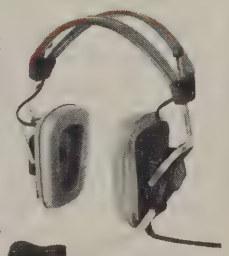


CA-232U Uni-Cable™ Interface A universal Packet TNC cable that provides interfacing between popular TNCs and all popular VHF/HF transceivers. No soldering required, easily programmed by user to mate with 8-pin mic. connectors **$34.95**



CA-232HH Uni-Cable™ Interface Easy connection of popular TNCs to popular handhelds that use 2.5mm and 3.5mm microphone and earphone jacks. No soldering is required **$34.95**

HYGAIN/TELEX



The "Contester"

2400-155 A high quality Headset and boom mounted noise canceling Microphone combination. Wide, 100 to 8000Hz response for maximum QSO intelligibility. The boom rotates and can be worn on either side, and the microphone automatically shuts off when placed upright. The dynamic headphones have comfortable foam cushions with removable washable socks **$79.95**

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AT-200 VHF & AT-400 UHF Handheld Tranceivers

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- 0.35/2.5W/5W with 7.2/12.0 V Battery
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- Rx expands 130 - 174 MHz by keypad control
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- Programmable Non-standard Shifts
- Keypad Lock
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- 6 Channel Steps
- Dual Frequency Watch
- Backlit LCD Display and DTMF Pad
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- One Touch Open Squelch
- Call Frequency Button
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AT - 400/AT - 400HP :

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- Rx expands to 400 - 480 MHz

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AR-146 & AR-446 Mobile Tranceivers

AR - 146 : 144 - 148 MHz

- RX expands 125 - 174 MHz
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- 40 Memory Channels/Call Channel/Channel Number Display
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- 4 Step Display Dimmer
- Frequency Lock
- 16 Digit DTMF Decode and Display
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- Time Out Timer (Adjustable)
- Selectable Frequency Steps
- S - Meter Squelch

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AR - 446 : 430 - 450 MHz

- RX expands 425 - 475 MHz
- Power Output: 35/10/5W

ARC - 12
SMART CHARGER

SLC - 200S
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Formerly ANLI Antenna

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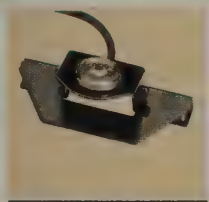
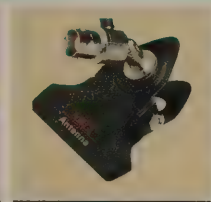
Mounts

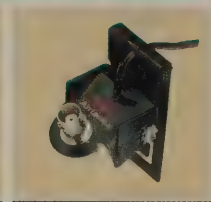
MC-1 Magnet Mount NMO or UHF



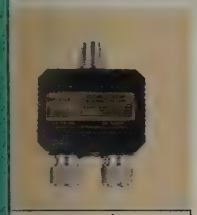
TA-1 Trunk Mount NMO or UHF



CM-1,CM-2 BNC CLIP CM-2 Angle Adjustable



WA-1 BNC Window Mount



DX-2 Duplexer
TX-3 Triplexer

MC-2 Super Magentic & Suction Mount

TA-2
Trunk Mount & 15' RG-58 C/U

1. NMO Kit
2. Removable Connector Apply to MC-2 & TA-2

ew Features:
C-2 : 5" Dia. Super Strong Mag. & Suction Base Mount. Accepts NMO & UHF Antennas. Removable PL-259, convertible to BNC or N Connectors.
A-2 : Heavy Duty Trunk Lip Mount. Adjusts to any angle. Accepts NMO & UHF Antennas. Removable PL-259, convertible to BNC or N Connectors.

Power Station

3,6,9,12V DC / Power Supply + Battery

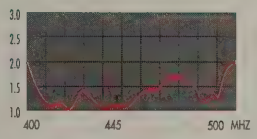
SB - 752

1. LED Charging Indicator
2. DC 3-6-9v Selector Switch
3. Charge Input Cigarette Socket
4. DC 3-6-9v Output Connector
5. Voltmeter
6. LED Power "On" Indicator
7. Main Power On/Off Switch
8. DC 12v Output Cigarette Socket
9. Output (+ -) Terminal-15A

7 lb. H8" W7" X 4.5"
Quick charging AC adaptor & car cable included.

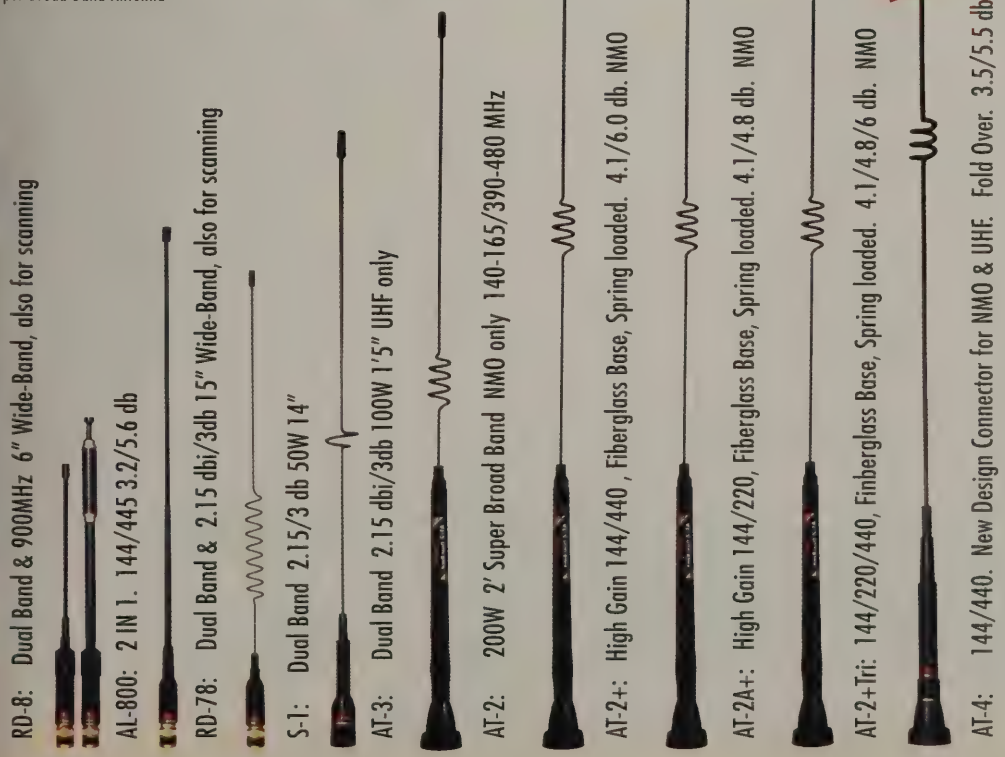
T & Mobile Antennas

AT-2



[US patent pending]

Super Broad Band Antenna



RD-8: Dual Band & 900MHz 6" Wide-Band, also for scanning

AL-800: 2 IN 1. 144/445 3.2/5.6 db

RD-78: Dual Band & 2.15 dbi/3db 15" Wide-Band, also for scanning

S-1: Dual Band 2.15/3 db 50W 14"

AT-3: Dual Band 2.15 dbi/3db 100W 1'5" UHF only

AT-2: 200W 2' Super Broad Band NMO only 140-165/390-480 MHz

AT-2+: High Gain 144/440 , Fiberglass Base, Spring loaded. 4.1/6.0 db. NMO

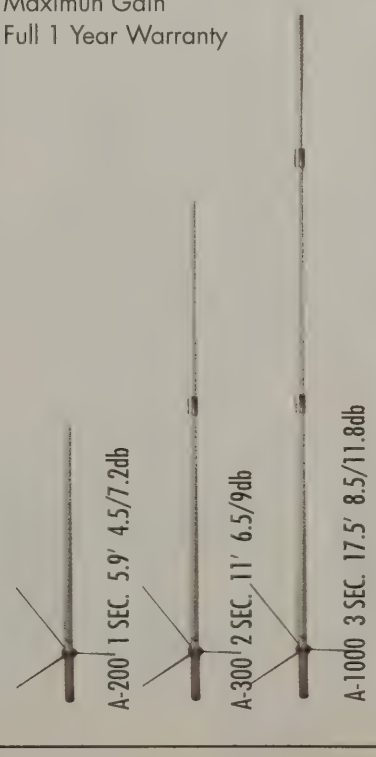
AT-2A+: High Gain 144/220, Fiberglass Base, Spring loaded. 4.1/4.8 db. NMO

AT-2+Tri: 144/220/440, Finberglass Base, Spring loaded. 4.1/4.8/6 db. NMO

AT-4: 144/440. New Design Connector for NMO & UHF. Fold Over. 3.5/5.5 db

Base Antennas

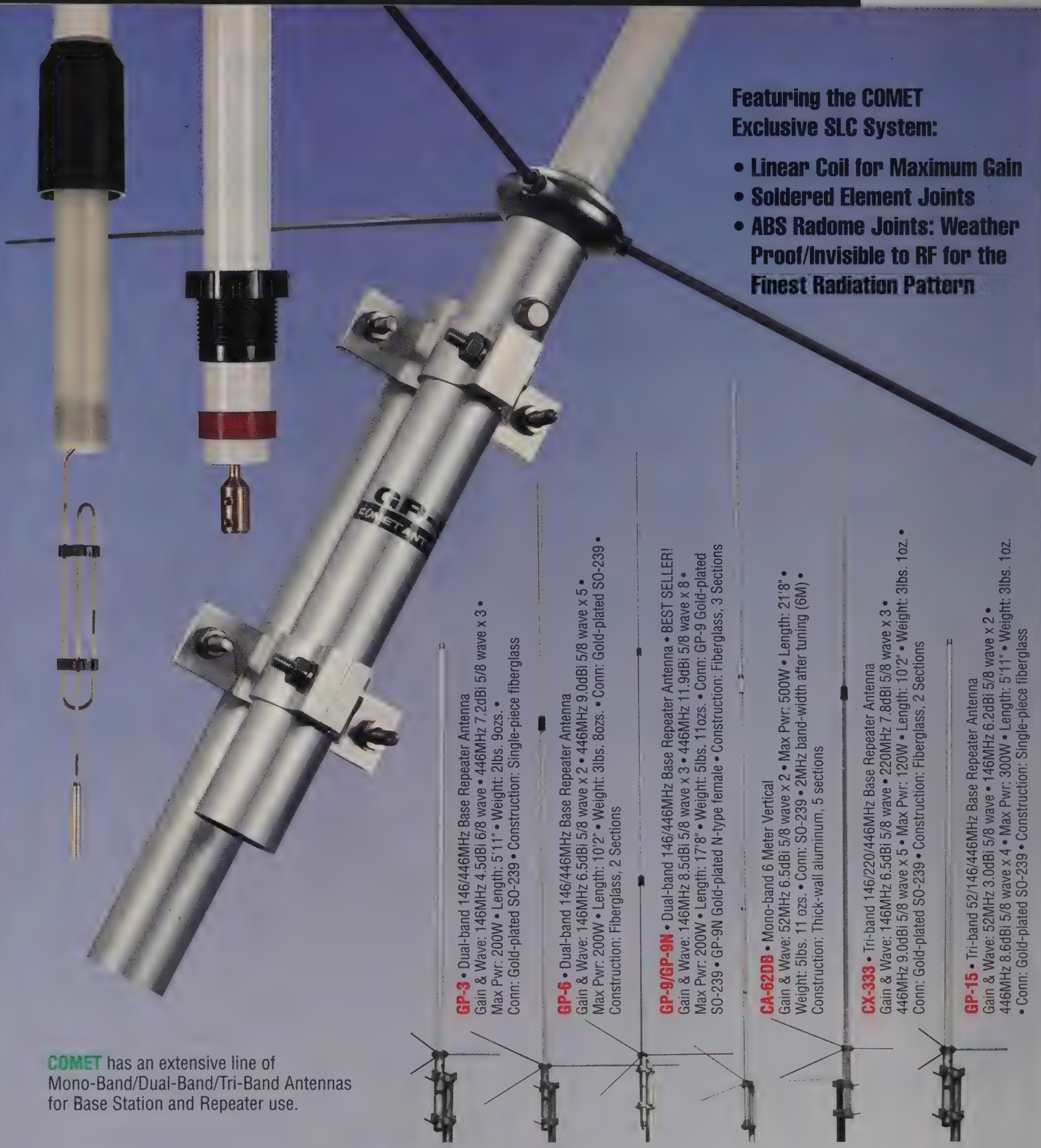
- Fiberglass Radome
- High Wind Rating
- No Tuning Required
- Wide Band
- 100% Weather Proof
- Soldered Element Joints
- Maximun Gain
- Full 1 Year Warranty



A-200 1 SEC. 5.9' 4.5/7.2db

A-300 2 SEC. 11' 6.5/9db

A-1000 3 SEC. 17.5' 8.5/11.8db



Featuring the COMET Exclusive SLC System:

- **Linear Coil for Maximum Gain**
- **Soldered Element Joints**
- **ABS Radome Joints: Weather Proof/Invisible to RF for the Finest Radiation Pattern**

COMET has an extensive line of Mono-Band/Dual-Band/Tri-Band Antennas for Base Station and Repeater use.

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CH-32
Miracle Baby
146/446MHz
HT Antenna
Gain: 0dBi
Length: 1.75"
Conn: BNC

- **Gold-Plated Connectors**
- **High-Quality Craftsmanship**
- **Unique Fold-Over Feature**

NEW Z750 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: Gold-plated PL-259 • Max Pwr: 200W

NEW Z780 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
146MHz 6/8 wave 4.5dBi • 446MHz 5/8 wave x 3 7.2dBi • Length: 62" • Conn: Gold-plated PL-259 • Max Pwr: 150W

NEW SBB-15 • Tri-band 52/146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 52MHz 0dBi 1/4 wave • 146MHz 4.5 dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

NEW SBB-7/SBB-7NMO • Dual-band 146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SBB-7 PL-259/SBB-7NMO NMO • Max Pwr: 70W

NEW SBB-5/SBB-5NMO • Dual-band 146/446MHz w/fold-over **NEW BLACK COLOR**
Gain & Wave: 146MHz 2.5dBi1/2 wave • 446MHz 5.5dBi 5/8 wave x 3 • Length: 39" • Conn: SBB-5 PL-259/SBB-5NMO NMO • Max Pwr: 120W

CX-224/CX-224NMO • Tri-band 146/220/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 220MHz 3.5dBi 5/8 wave • 446MHz 6.0dBi 5/8 wave x 2 • Length: 36" • Conn: CX-224 PL-259, CX-224NMO NMO • Max Pwr: 100W

B-20/B-20NMO • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.0dBi 5/8 wave x 2 • Length: 30" • Conn: B-20 PL-259/B-20NMO NMO • Max Pwr: 50W

SH-55 • Super Flexible 146/446MHz HT Antenna
Gain: 146MHz 1.5dBi • 446MHz 3.2dBi • Length: 15.5" • Conn: BNC • Max Pwr: 10W

B-10/B-10NMO • Dual-band 146/446MHz cellular look-a-like • Gain & Wave: 146MHz 0dBi 1/4 wave • 446MHz 2.15dBi 1/2 wave • Length: 12" • Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

COMET Specializes in a wide assortment of Mobile Mounting Systems that require NO HOLES. A variety of trunk lid, hatchback, rain gutter, roof rack and window mounts are available along with low loss coax cable assemblies, for the ultimate mobile station!

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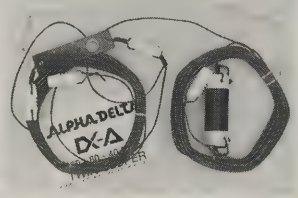
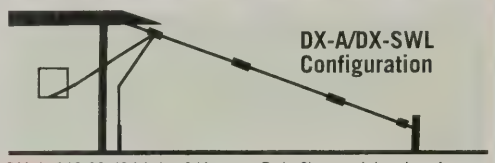
Solving Antenna and Lightning Problems ...

Limited Space High Performance Antennas

STAINLESS STEEL HARDWARE • FULLY ASSEMBLED • SEVERE WEATHER RATED COMPONENTS • NO-TRAP DESIGN

Unlike the usual trap antenna, there are no capacitors to break down under high RF voltages. Full legal power operation – with "ISO-RES" inductors and 12 gauge insulated solid copper wire. 50 Ω direct coax feed, an antenna tuner is usually not required when operating in the resonant bands, but may be safely used for multi-band operation if desired.

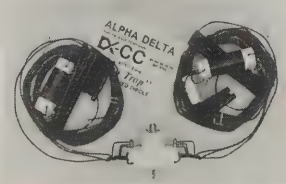




DX-A 160-80-40 Meter 1/4-wave Twin Sloper. A top low frequency DX antenna. Combines the tremendous DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67', the other 55' – installs like an inverted-V with ground return thru tower or down-lead **$59.95**

DX-B A single wire, high performance 1/4-wave DX sloper for 160, 80, 40, and 30 meters. Designed for limited space installations where room doesn't allow for the DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. It's pre-assembled and pre-tuned. Just put it up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta "Iso-Res" RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50 Ω coax feed, rated for full legal power.... **$69.95**

DX-SWL SWL Broadcast Sloper. Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter short-wave plus AM broadcast bands. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft.... **$79.95**



DX-CC "No-Trap" 80-40-20-15-10 meter Dipole or Inverted-V. Overall length is 82 ft ...**$119.95**

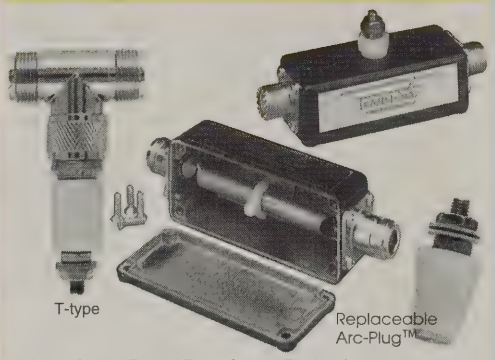
DX-DD "No-Trap" 80 and 40 meter Dipole or Inverted-V. Overall length is 82 ft..... **$89.95**

DX-EE "No-Trap" 40-20-15-10 meter Dipole or Inverted V. also cover 30-17-12 meters with a tuner. 40 ft overall..... **$99.95**

DX-Series Monoband Dipoles Full-size dipoles utilizing the Delta-C Center Insulator with built-in SEP Arc-Plug® Static Electricity Protector. Fully assembled using the Delta -C, 12 ga. insulated high-strength solid copper wire, CIN end insulators and 50 ft. nylon support rope. Feed with coaxial cable or open-line, rated for legal power. Cutting chart included.

DX-80 For 3.5MHz (75-80 meter band), 133 ft. long **$49.95**
DX-40 For 7 MHz (40 meter band), 66 ft. long..... **$39.95**
DX-20 For 14 MHz (20 meter band), 33ft. long..... **$39.95**

Transi-Trap® Surge Protectors



Alpha Delta Transi-Trap Surge Protectors are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the **Arc-Plug™**, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

An Arc-Plug can discharge 1000's of normal surges without replacement, and the life of the device is a function of the surge current amplitude and duration. After a sufficient number of discharges there is a gradual lowering of the breakdown voltage and insulation resistance. Replacement indicated by an increase in VSWR. If a unit is "hit" with a big strike, it is designed to fail "shorted", giving an instant indication that replacement is needed. Other brands fail "open", which leaves your expensive equipment unprotected without you knowing it.

Highest quality, finest materials. – heavy cast aluminum housing, brass constant-impedance (50Ω) element, brass ground hardware and only Amphenol connectors are used.

Standard Transi-Trap units are the choice of the U.S. Military, many government agencies, worldwide. Transi-Trap Protectors are designed for 50Ω coaxial cable and are available with standard SO-239 connectors or N-type connectors which extend operation through 1 GHz.

Model RT Rated at 200W thru 500 MHz..... **$32.95**
Model RT/N Rated at 200W thru 1GHz..... **39.95**
Model HV Rated at 2KW thru 500 MHz..... **35.95**
Model HV/N Rated at 2KW thru 1GHz..... **42.95**
Model LT "T"-type, rated at 200W thru 30 MHz..... **22.95**

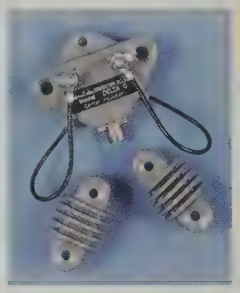
DX-ULTRA Shortwave Dipole Antenna Covers AM Broadcast thru 30MHz. Efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial and Utility frequencies. Designed with ISO-RES inductors, parallel wire elements and the exclusive DELTA-C Center Insulator with the built-in SEP ARC-PLUG® Static Electricity Protector. Over all length is 80 ft. – install as a dipole, inverted-vee, or full sloper. Can be used with a tuner as a transmit antenna up to 2000W. Connectors will accept either coaxial cable or balanced line. Comes fully assembled, ready to go! **$119.95**

Order Toll Free & use your Credit Card

Lightning Surge Protected 2 & 4 Position Coax Switches

Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected.The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable **Alpha Delta Arc-Plug™ Cartridge** provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal amateur power.

DELTA-2 2-position coaxial switch with SO-239 connectors, rated for up to 500MHz..... **$49.95**
DELTA-2/N 2-position coaxial switch with N-type connectors, rated for up to 1.3 GHz..... **$64.95**
DELTA-4 4-position coaxial switch with SO-239 connectors, rated for up to 500MHz..... **$79.95**
DELTA-4/N 4-position coaxial switch with N-type connectors, rated for up to 1.3 GHz..... **$89.95**



Antenna Hardware Kit

Don't assemble your next dipole antenna without one of these CENTER and END insulator combos. They're designed for strength, and to provide equipment protection with a built-in replaceable SEP ARC-PLUG® Static Electricity Protector. Ideal for dipoles, Vees, zepps and all kinds of SWL receive antennas. Feeds with either coaxial cable or balanced line. Rated for full legal power.

The SEP SEP ARC-PLUG protector which is mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges and routes them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges. Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to several thousand volts; so potent, they can actually puncture the dielectric of unterminated coaxial cable.

The DELTA-C center insulator and DELTA-CIN end-insulators are fabricated with an extremely rugged UV and RF resistant DELTALLOY material that is so tough, you can drop it off a roof without damage. You no longer need to rely fragile ceramic or glass insulators. Only stainless steel hardware used in the center insulator for salt air and other corrosive environments, and all internal connections are hard soldered for highest reliability.

DELTA-C Antenna hardware kit Center insulator, 2 end-insulators, and SEP ARC-PLUG Static Electricity Protector .**$29.95**
DELTA-CIN End-insulators (separate) ..... ea. **$1.00**

R5 / R7 Halfwave HF Verticals

cushcraft CORPORATION

The right antennas for every ham.

The "R" series antennas have revolutionized the way hams look at verticals. Dedicated hams all over the world have tried the R5 and R7 and have been amazed that these compact, rugged verticals can perform the way they do. The outdated idea that a vertical antenna is a serious compromise has been put to rest. Not only are these antennas compact and able to fit just about anywhere, but they're built strong and built to last.

The R5 and R7 are the result of decades of experience in antenna design. They have proven themselves on Arctic DX-peditions, tropical island contest stations, ocean vessels and even on a hot air balloon trip. Their greatest success, though, has been in amateur home stations throughout the world where they provide exceptional performance.

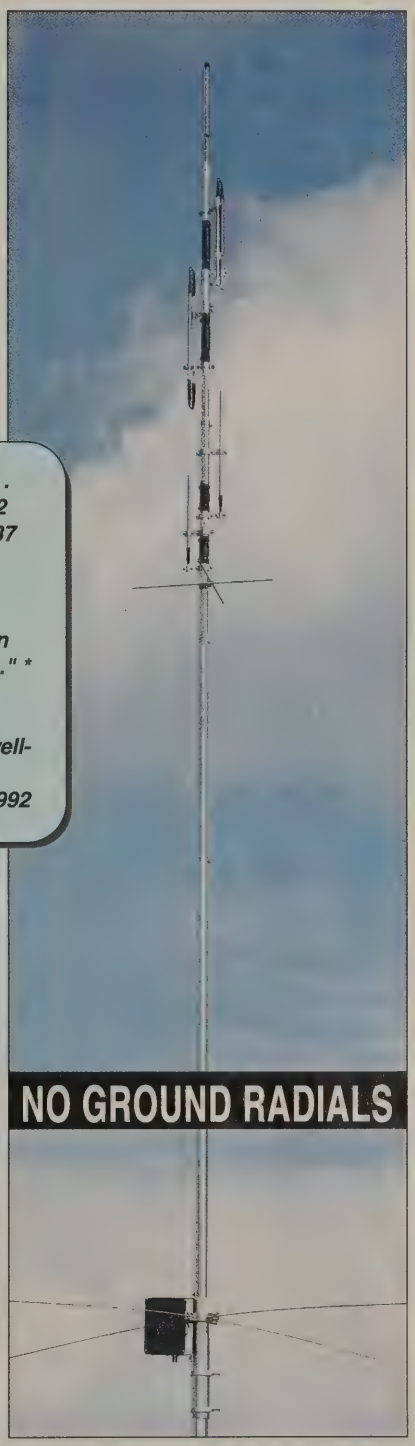
Whether you understand the technology involved or not, know that these compact antennas perform like no others. Tune in on 10 to 40 meters and talk to many enthusiastic R5 and R7 owners.

- **No Ground Radials**
- **Compact Size**
- **Low Angle Radiation**
- **Automatic Band Switching**
- **Broadband Matching**
- **Mount Anywhere**
- **No Moving Parts**

MODEL	R5	R7
Frequency, MHz	28, 24, 21, 18, 14	28, 24, 21, 18, 14, 10, 7
Gain, dBi	3	3
Electrical Wavelength	Halfwave	Halfwave
SWR 2:1 Bandwidth	10 m-2 MHz	10 m-2 MHz
	12 m-100 KHz	12 m-100 KHz
	15 m-450 KHz	15 m-450 KHz
	17 m-100 KHz	17 m-100 KHz
	20 m-350 KHz	20 m-150 KHz
		30 m-50 KHz
		40 m-75 KHz
Power Rating, Watts PEP	1800	1800
Radiation Angle, Degrees	16	16
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern Deg.	360	360
Height, ft (m)	17 (5.2)	22.5 (6.9)
Mast Size Range, in	1.5-1.75	1.5-1.75
(cm)	(3.8-4.4)	(3.8-4.4)
Wind Load, ft2 (m2)	1.4 (.13)	2.25 (.21)
Weight, lb (kg)	8.7 (4)	12.3 (5.6)
49" Counterpoise Radials Supplied	4	7

10, 12, 15, 17, 20 Meters

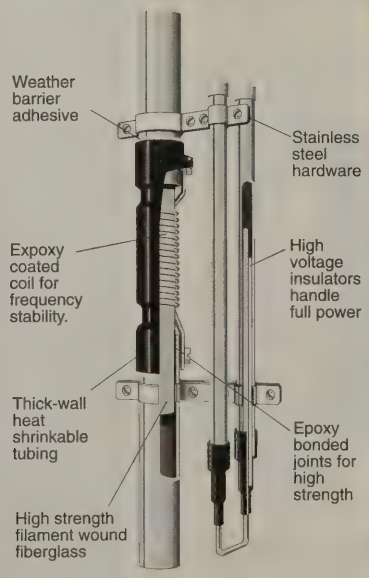
Thousands of R5's are currently in use by satisfied hams worldwide. This compact, 17 foot high halfwave has gained popularity because of its reputation for uncanny performance level's and the fit-anywhere convenience of a vertical without ground radials. Put the world in your log book on 10 through 20 meters with the Cushcraft R5 halfwave vertical.



"It did everything I hoped and more. . . In 27-1/2 hours of operating over 5-1/2 days, we made 2788 CW QSO's with 87 countries. . ." *
QST, Oct. 1990

"I had used the antenna with my RV in Mexico and worked over 80 countries." *
CQ, Nov. 1989

"I must congradulate Cushcraft for a well-made, easy-to-use antenna." *
Practical Wireless, Sept. 1992



"The antenna was of vital importance to me as I used it twice a week to speak to my wife and children back in New York." (WA2RUD / 5H3WL / 5Z4PI)

"The R5 works superb. Best DX vertical I ever had during 30 years of ham practice." (DJ8WI)

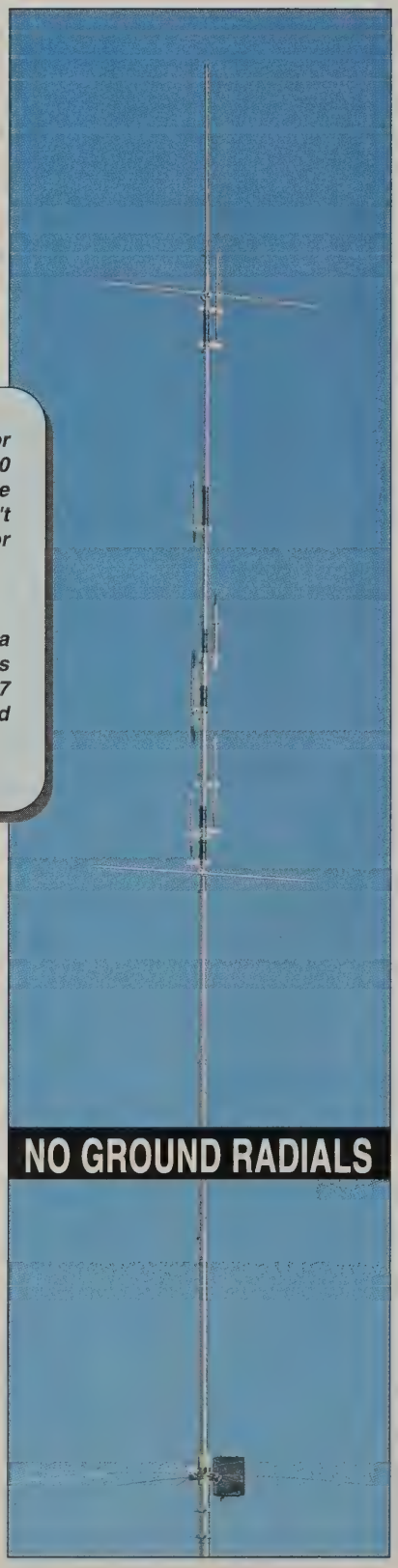
"Everything assembled beautifully and how nice not having to have an antenna tuning unit when band changing." (G4JZK)

"Thanks for designing such an excellent antenna that provides so much fun for us apartment dwellers." (N1LKH)

* Reprinted by permission from QST, CQ and Practical Wireless magazines.

10, 12, 15, 17, 20, 30, 40 Meters

This 22 foot marvel packs a punch on 10 to 40 meters that has to be experienced to be believed. With only 7 short counterpoise rods, the R7 will fit just about anywhere. If you're looking for the most performance in the smallest package then the R7 is for you. Precisely tuned radio frequency traps optimized for each band and strategically placed X-hats enable the R7 to radiate a low angle signal that makes working DX a snap. Experience 7 band performance anywhere with the incredible R7.

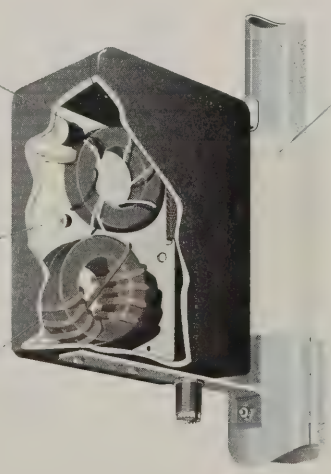


"It's an excellent solution for somebody who's looking for a low-profile homestation antenna that works well on 40 through 10 meters. . . ideal for portable operation because it easily breaks down into a small package, and you don't have to worry about a radial system or finding trees for supports." *

QST, August 1992

"The instructions are very detailed and clear. . .the antenna goes together in about 30 minutes. . . running 100 Watts and using the R7 I managed to work DXCC (actually 117 countries). . .hardware is of very outstanding material, and the antenna is best described as rugged." *

CQ, August 1992



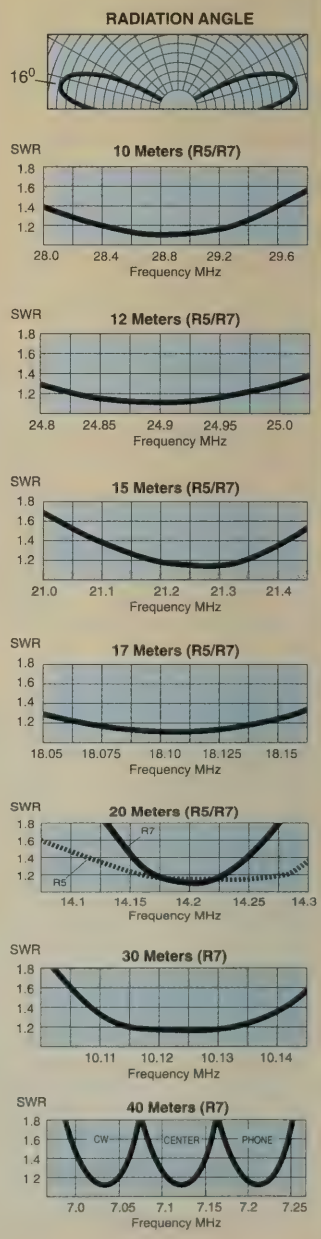
"Excelentes resultados con la R7" (XE1USN)

"It performed excellently even under extreme weather conditions both electrically and mechanically." (3Y2GV) Antarctica

"Tropical storm Zelda struck Kwajalein on Thanksgiving Day. . . As the beams blew down, my R7 vertical stayed up." (V73CT)

"Used R7 on IOTA EU-135 expedition. . . Beautiful performance!" (SM3DMP)

The R7 and R5 do not need ground radials. Because of their compact size, they are perfectly suited for almost any limited space application. Whether you're operating from a balcony, RV, rooftop or mobile environment, you will find the R7 and R5 to be exceptional performers.



* Reprinted by permission from QST, CQ and Practical Wirless magazines.

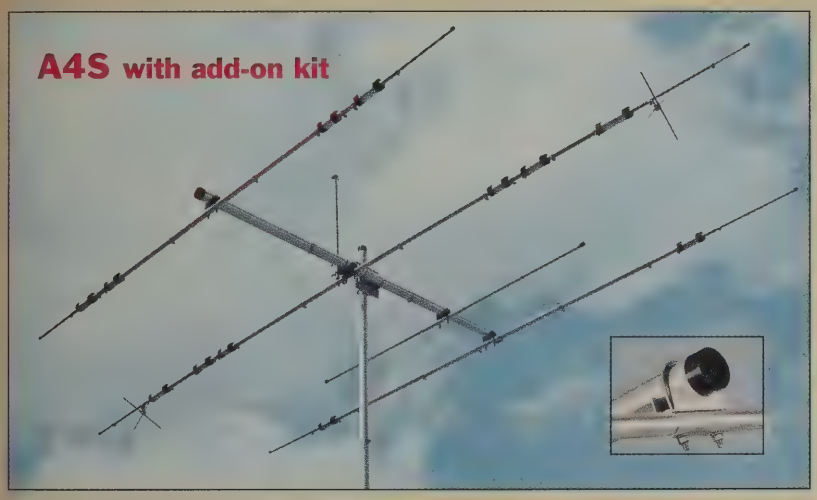
World Ranger Multiband HF Yagis

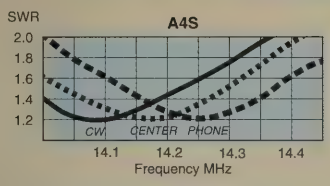
10, 15, 20, 40 Meters

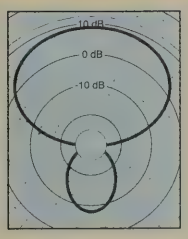
Cushcraft Tribanders Make More DX Fun!

Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!

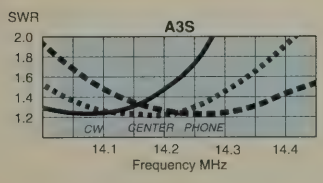
Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S , A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!

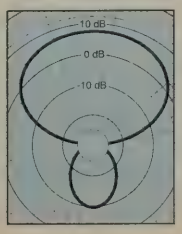






A4S RADIATION PATTERN





A3S RADIATION PATTERN

A4S Four Element Beam

With stainless steel hardware.

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

A3S Three Element Beam

With stainless steel hardware.

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you!

MODEL	A4S	A3S
Frequency, MHz	28, 21, 14	28, 21, 14
No. Elements	4	3
Forward Gain, dBd	8.9	8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth KHz	>500	>500
Power Rating, Watts PEP	2000	2000
3 dB Beam Width, Deg. E Plane	58	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)
Boom Diameter, In (cm)	2 (5.10)	1.5 (3.81
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft^2 (m^2)	5.50 (0.51)	4.36 (0.47)
Weight, lb (kg)	37 (16.8)	27 (12.9)

30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

A743 7 MHz/10 MHz kit for A3S
A744 7 MHz/10 MHz kit for A4S
A103 10 MHz kit for A3WS

MODEL	A743/A744		A103
BAND	**7 MHz (40 m)**	**10 MHz (30 m)**	**10 MHz (30 m)**
Driven Element with Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 min. 28.4 max. (8.27-8.66)	32.1 (9.8)
Windloading ft2 (m2)	.58 (.05)	.27 (.03)	.45 (.04)
Bandwidth, KHz	125	150	250
Power Rating, Watts	2000 PEP	2000 PEP	2000 PEP
Side Rejection, dB	20	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)	3.25 (1.47)

10 through 20 Meters

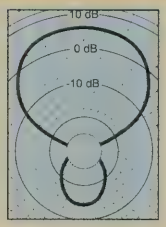
Skylog

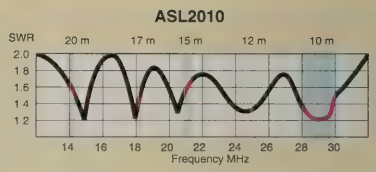
- **Continuous five band coverage from 13.5 to 32 MHz**
- **Constant gain over entire frequency range**
- **6.4 dBd gain, 65 degree beamwidth**
- **High efficiency design, antenna stays cool and VSWR steady**
- **18 foot boom and 19.5 foot turning radius**

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

MODEL	A3WS	ASL2010
Frequency, MHz	24, 18	13.5-32
No. Elements	3	8
Forward Gain, dBd	8.0	6.4
Front to Back Ratio, dB	25	15-20
SWR 1.2:1 Typical		
2:1 Bandwidth	300 KHz	18.5 MHz
Power Rating, Watts	2000 PEP	2000
3 dB Beam Width, Deg. E Plane	60	65
Boom Length, ft (m)	14 (4.27)	18 (5.48)
Boom Diameter, In (cm)	1.50 (3.81)	2.0 (5.08)
Longest Element, ft (m)	25.1 (7.66)	38 (11.58)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	14.4 (4.4)	19.25 (5.86)
Mast Size Range, in	1.25-2	1.5-2
(cm)	(3.18-5.08)	(3.18-5.08)
Wind Load, ft^2 (m^2)	4.1 (.38)	10.1 (.93)
Weight, lb (kg)	22.5 (10.2)	55 (25.5)

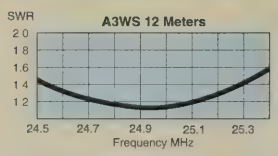
ASL2010

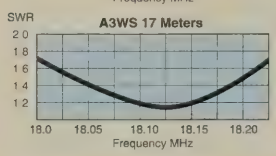




A3WS WARC Bands 3 Element Beam

Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.





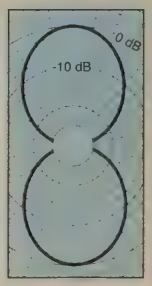
Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

D3W World Ranger Dipole

The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.

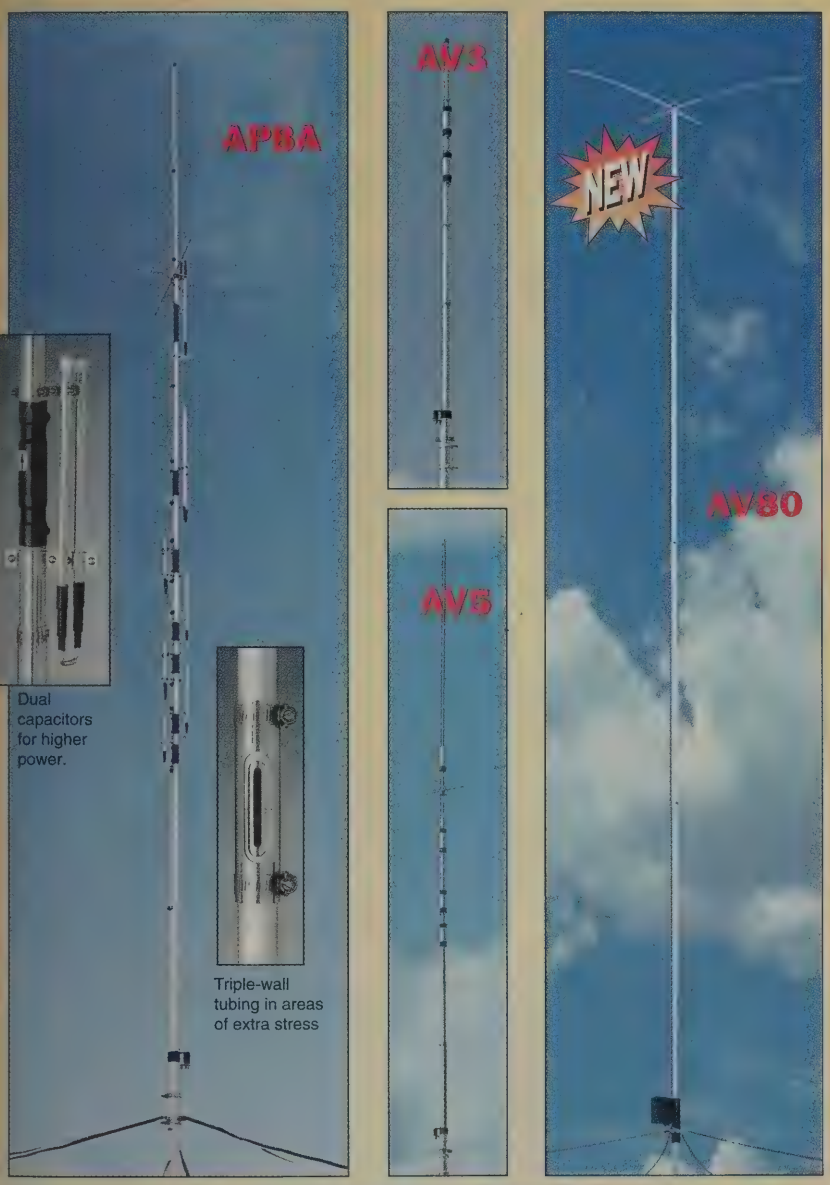
MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350	>500	>200
		40>125		
Power Rating				
Watts PEP	2000	2000	2000	2000
Length ft	42.25	35.8	25.8	34.0
(m)	(12.88)	(10.92)	(7.86)	(10.37)
Mast Size, in(cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft2 (m2)	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



Typical Dipole Radiation Pattern

10 Through 80 Meters

Limited space or budget? Want a low angle of radiation for more DX contacts? Consider using a Quarterwave vertical. These antennas require a good ground system, usually created with radials. The resulting antenna system gives you the most HF bang for the buck. If you want to cover several bands, the AP8A, AV5 or AV3 is the answer. To improve your stations performance on 75/80 meters, use the AV80. With any of these models, excellent DX will be yours within hours.



80 Meter, AP8A, AV3 AND AV5 REQUIRE RADIALS

MODEL	AP8A	AV80
Frequency, MHz	28, 24, 21, 18, 14, 10, 7, 3.5	3.5
Electrical Wavelength	1/4	1/8 wavelength to top hat
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band Except 40M>150 KHz & 80 M>80 KHz	With proper ground
Power Rating, Watts PEP	2000	1500
Radiation Angle, degrees	18	18
Horizontal Radiation Pattern, degrees	360	360
Height, ft (m)	26 (7.92)	36 (10.97)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft^2 (m^2)	1.7 (.16)	4.2 (.42)
Weight, lb (kg)	9.5 (4.3)	20 (9.1)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	APR80A

NEW 80 Meter Vertical

For a special antenna on 75 and 80 meters, consider the NEW Cushcraft AV80. This time tested design features a top loading coil and a four element capacitive top hat. The radiator is 36 feet (10.9 M) long and 2 inches (5 cm) O.D. Its matching network allows immediate QSY'ing from the DX phone band to the DX CW band. Or, it could be set entirely in either the phone band or the CW band. The AV80 will take all the power you want to feed it. The matching network components are overrated to operate up to 1500 Watts. The AV80 is designed to match impedances with up to 5 Ohms of ground loss. It works well with 4 radials elevated 8 to 10 feet (2.4-3 M) off the ground or 16 quarterwave radials if ground mounted. Ground mounting the antenna would require a more extensive radial system. AV80 is an excellent choice for multi-element arrays.

AP8A, Eight Bands In One Tough Antenna

The AP8A is the next generation eight-band quarterwave that has been strengthened with thick wall tubing, up to three layers deep in some sections, and high tensile strength fiberglass. The traps have been beefed up to handle the legal limit and are moisture sealed. You can be up and running on 10 through 80 meters in no time. (The APR-18A Radial Kit will make the job even easier.) The key to the AP8A's eight band coverage is the automatic bandswitching and efficient traps. The traps are parallel LC circuits which allow broadband operation. The AP8A is a very popular antenna with new hams because it's such a great value. Eight bands in one rugged antenna at an affordable price.

APR18A Radial Kit

The Cushcraft APR-18A radial kit is the perfect match for the AP8A, AV3, AV5, or any quarterwave amateur HF vertical where a good low angle signal on the horizon and a low VSWR are important. The kit offers maximum performance on all HF bands and consists of only 9 multiple and single-conductor radials, with a maximum length of only 31 feet. It's great for quick installation at either ground level or rooftop sites.

AV3 Three Band & AV5 Five Band

Our AV3 handles 10, 15, and 20 meters with fine performance and easy assembly. It has the same rugged construction as the AV5. The AV5 works with the popular 10, 15, 20, 40 and 80 meter bands with broad bandwidth and full legal power. For versatility, this is the antenna for you!

MODEL	AV3	AV5
Frequency, MHz	28, 21, 14	28, 21, 14, 7, 3.5
Electrical Wavelength	1/4	1/4
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band	Full Band except 80 M>70 KHz
Power Rating, Watts PEP	2000	2000
Radiation Angle, degrees	18	18
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern, deg.	360	360
Height, ft (m)	14 (4.2)	25 (7.4)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft^2 (m^2)	1.02 (.1)	1.89 (.19)
Weight, lb (kg)	5 (2.3)	8 (3.6)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	Yes, APR18A

10, 15 Meters

cushcraft CORPORATION

10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

MODEL	10-4CD	10-3CD
Frequency, MHz	28.0-29.7	28.0-29.7
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>900	>1400
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	40	40
Boom Length, ft (m)	16 (4.88)	10 (3.05)
Boom Diameter, In (cm)	2.0	1.63-1.50
	(5.08)	(4.1-3.8)
Longest Element, ft (m)	17.58 (5.34)	17.66 (5.38)
Element Center Dia, in (cm)	.88-.63	.88-.63
	(2.2-1.6)	(2.2-1.6)
Turning Radius, ft (m)	11.5 (3.5)	10 (3.05)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	3.1 (.29)	2.3 (.21)
Weight, lb (kg)	18 (8.16)	11 (5.00)

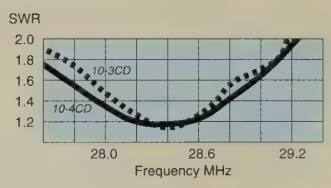
More Performance Than You Ever Imagined

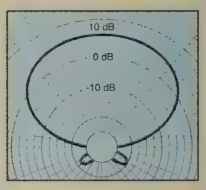
More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

Assembly is easy and installation can often be done by one person!
Skywalkers are contest winners. One of these fine antennas is perfect for you.





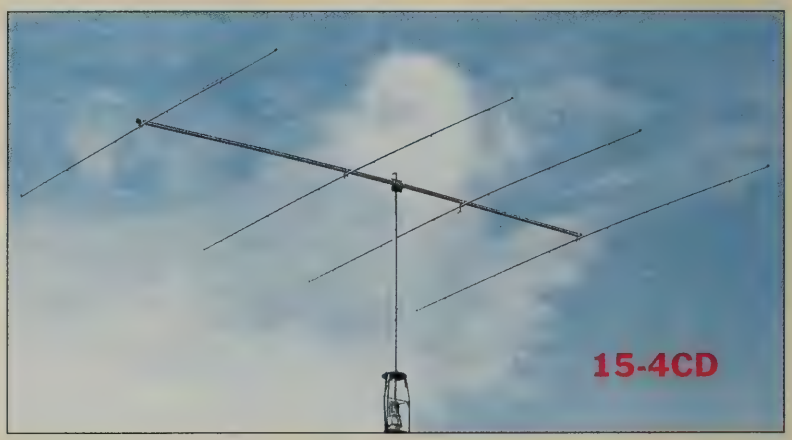
Typical 3 Element Pattern

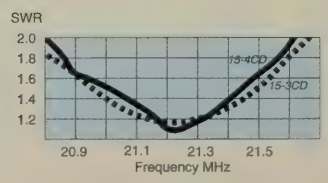
15 Meters

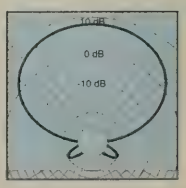
These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

MODEL	15-4CD	15-3CD
Frequency, MHz	21.0-21.45	21.0-21.45
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	500	500
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	20 (6.10)	14 (4.27)
Boom Diameter, In (cm)	2.0	2.0
	(5.08)	(5.08)
Longest Element, ft (m)	23.33 (7.11)	23.16(7.06)
Element Center Dia, in (cm)	1 (2.5)	1 (2.5)
Turning Radius, ft (m)	15.4 (4.72)	13.5 (4.11)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	4.5 (.42)	3.4 (.32)
Weight, lb (kg)	25 (11.34)	20 (9.07)



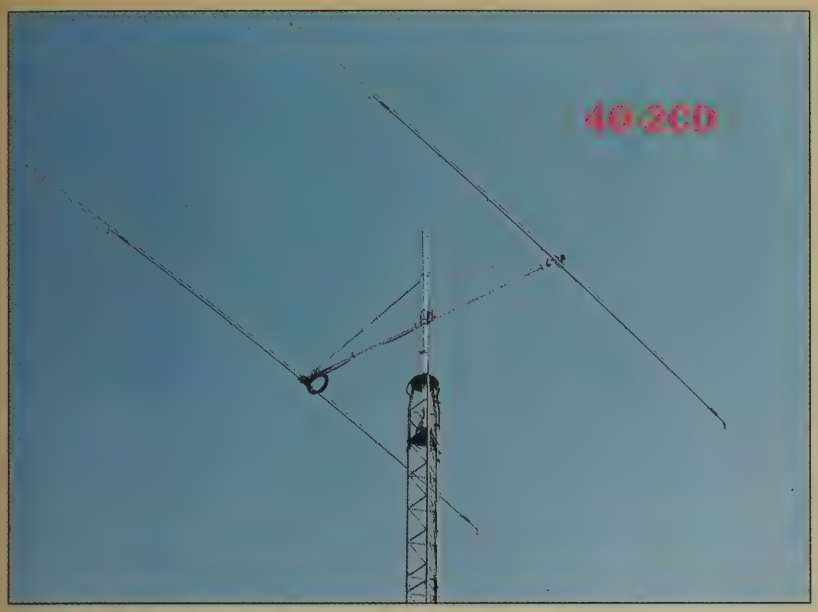


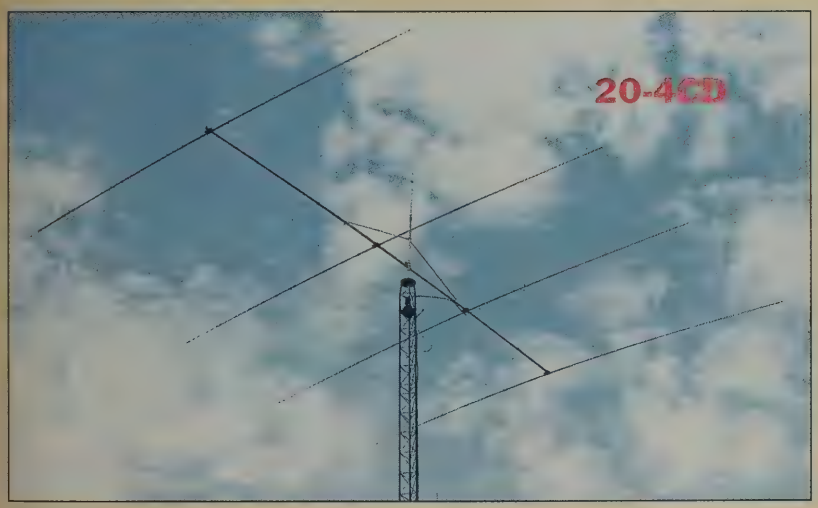


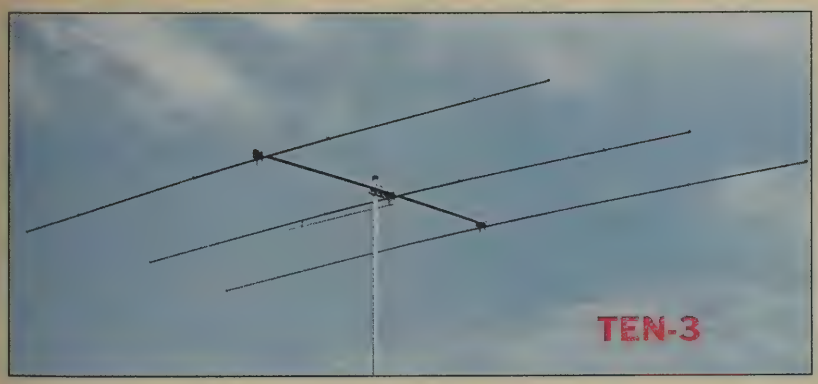
Typical 3 Element Pattern

Skywalker Monoband HF Yagis

10, 20, 40 Meters







40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

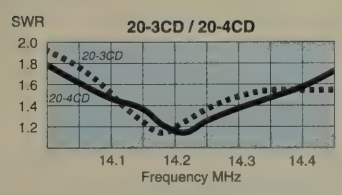
Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

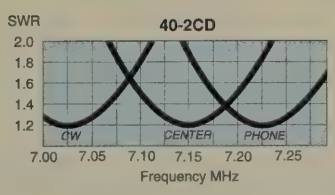
10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

MODEL	40-2CD	TEN-3
Frequency, MHz	7.0-7.3	28-29.7
No. Elements	2	3
Forward Gain, dBd	5.5	8
Front to Back Ratio, dB	20	25
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	200	>1500
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	70	64
Side Lobe Attenuation	>40	>40
Boom Length, ft (m)	23(6.9)	8 (2.44)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	1.38-1.25(3.5-3.2)
Longest Element, ft (m)	43 (12.9)	18 (5.49)
Element Center Dia., in (cm)	1.25 (3.1)	.75 (1.9)
Turning Radius, ft (m)	23.93 (7.29)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft^2 (m^2)	6.38 (.57)	2.0 (.20)
Weight, lb (kg)	44 (19.8)	9.9 (4.45)

MODEL	20-4CD	20-3CD
Frequency, MHz	14.0-14.35	14.0-14.35
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>400	>300
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	32 (9.75)	20 (6.1)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	2.0 (5.08)
Longest Element, ft (m)	36.08 (11.00)	35.95(10.96)
Element Center Dia., in (cm)	1.25 (3.1)	1.25 (3.1)
Turning Radius, ft (m)	23.75 (7.2)	20 (6.1)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft^2 (m^2)	8.1 (.75)	5.5 (.51)
Weight, lb (kg)	55 (24.95)	30 (13.61)





2 Meters

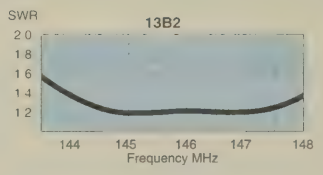
17B2 - 17 Element CW/SSB

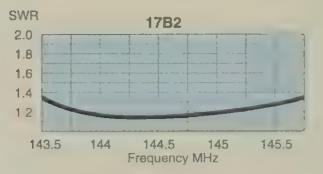
The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBd gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector. The improved Boomer brace system is easier to install. 17B2 is a new stronger Boomer with a cleaner profile, less weight and wind load. All these features result in contest winning performance and more day to day operating enjoyment.

13B2 -13 Element Wideband

The new 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector.

MODEL	13B2	17B2
Frequency, MHz	144-148	144-145
No. Elements	13	17
Forward Gain, dBd	15.8	18.0
Front to Back Ratio, dB	26	26
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 18	2 x 14.5
H Plane	2 x 19	2 x 15
Side Lobe Atten., dB, E Plane	>60	>60
Boom Length, ft (m)	15 (4.57)	31 (9.45)
Electrical Wavelength	2.2	4.5
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	1.8 (.17)	3.9 (.36)
Weight, lb (kg)	6.7 (.31)	15.75 (7.14)





Boomers are easily stacked for more gain. See page 17 for details.

"The 13B2 was very easy to assemble. Very good instructions. High quality parts. A very neat looking antenna." (NM8T)

"Reliable contacts [on 13B2] to repeaters 100 miles using low power. Horizontally polarized 150 miles plus." (N9MHV)

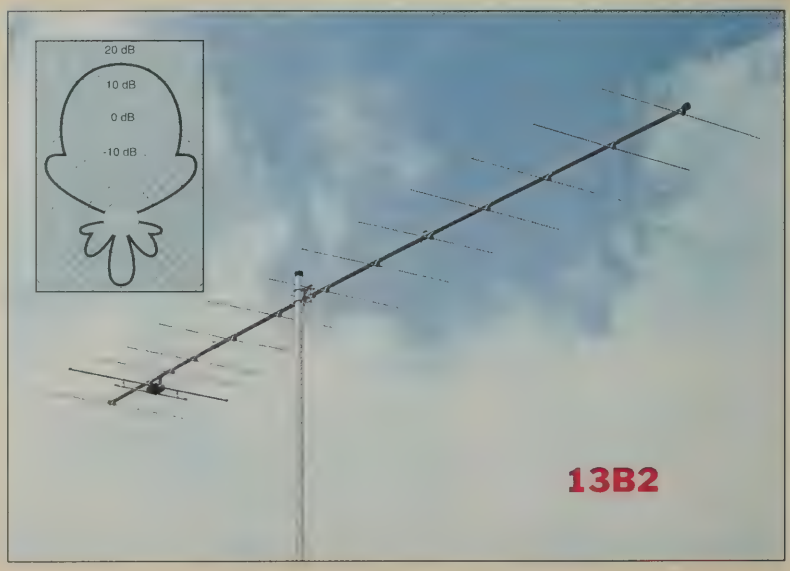
"New 17B2 is nice improvement over 4218XL both mechanically and electrically." (VE3ASO)

The Boomer tradition continues.

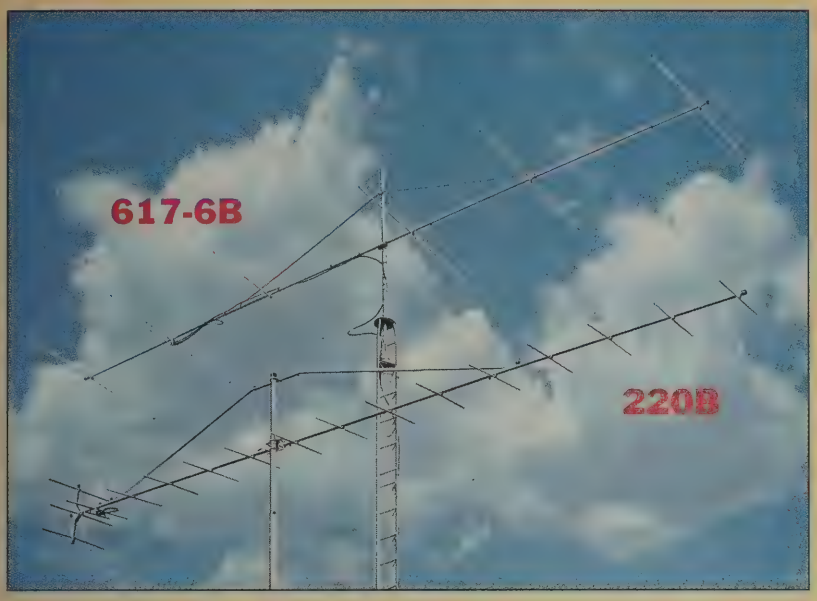
New Boomers offer more gain and cleaner patterns with greater mechanical strength. New element spacings and lengths plus an improved feed system make it happen. Select from the 17B2 for the strongest signal on the low end of the band or the 13B2 for broadband performance across the band.

Cushcraft Boomers all feature solid rod elements, stainless steel hardware and very easy to follow assembly instructions. Simple tools and a little time are all that are needed for assembly. The new Boomer line will make your operating time more rewarding and enjoyable. Move up to the new Boomers today.

The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.



70 CM, 1¼, 6 Meters



Two NEW 70 CM Yagis

These new Cushcraft antennas are designed for easy assembly. The elements are mounted atop the boom with stainless traditional hardware. The feed systems employ a UM4N balun enclosed in a UV stabilized housing. The 719B uses a broadband folded dipole while the 729B utilizes a modified T-match.

1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

6 Meters

Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

MODEL	617-6B	220B
Frequency, MHz	50-51	222-223
No. Elements	6	17
Forward Gain, dBd	14.0	17.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 13
H Plane	2 x 20	2 x 14
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	19 (5.8)
Electrical Wavelength	1.7	4.2
Longest Element, in (cm)	117 (297.2)	26 (66.2)
Turning Radius, ft (m)	17.7 (5.39)	9 (2.64)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft^2 (m^2)	4.8 (.45)	2.6 (.24)
Weight, lb (kg)	26 (11.79)	10.5 (4.77)

719B FM, CW and SSB 15.5 dBd

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.

729B CW and SSB 17.8 dBd

This is the new leader in performance for 70 CM activity. Assembly is easy. Tuning is even easier with our modified T-matching network. The modified-T allows for increased bandwidth over conventional T-matches. It includes capacitive elements which allow for more adjustment. Teflon® cable is used for power efficiency. The non-drooping boom does not require a support strut. Mount several in an array for increased gain.

MODEL	719B	729B
Frequency, MHz	430-450	430-440
No. Elements	19	29
Forward Gain, dBd	15.5	17.8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	20	>10
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	24	20
H Plane	19	22
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	13.5 (4.1)	22.17 (6.75)
Electrical Wavelength	6	9.8
Longest Element, in (cm)	13.75 (34.9)	13.75 (34.9)
Turning Radius, ft (m)	7.25 (2.2)	12.5 (3.8)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)
Wind Load, ft^2(m^2)	1.2 (.11)	2.2 (.21)
Weight, lb (kg)	5.6 (2.55)	8.6 (3.9)

1¼, 2 Meters

13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.

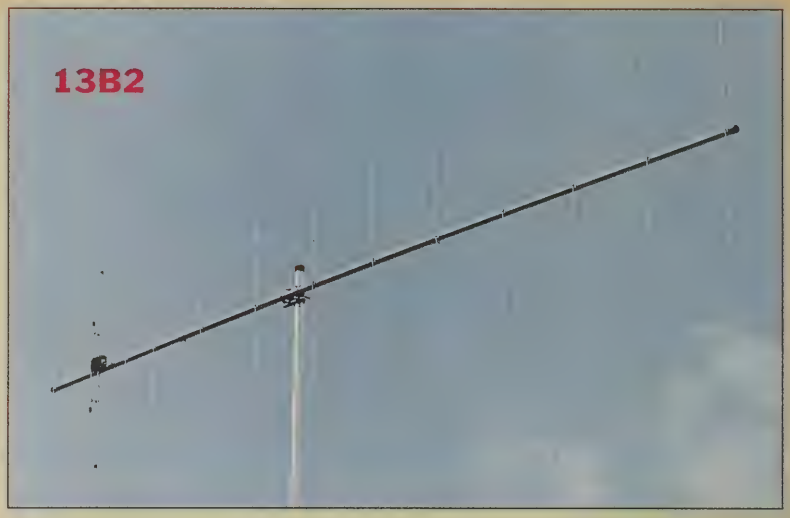
124WB - 4 Element Wideband

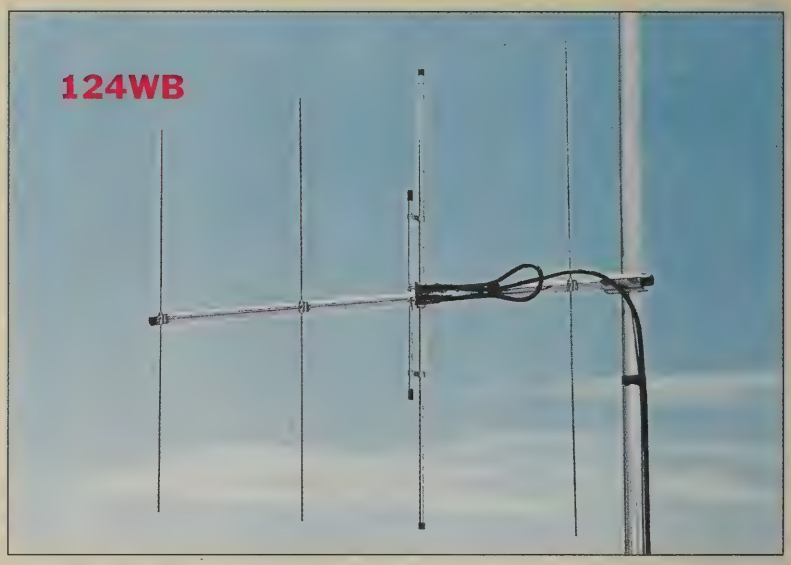
This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.

MODEL	124WB	13B2	26B2
Frequency, MHZ	144-148	144-148	144-148
No. Elements	4	13	26
Forward Gain, dBd	10.2	15.8	18.8
Front to Back Ratio, dB	19	26	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>4	>4
Power Rating, Watts PEP	2000	2000	2000
3dB Beamwidth, Degrees			
E Plane	60	2x18	2x18
H Plane	88	2x19	2x9.5
Side Lobe Attenuation,			
dB, E Plane	40	>60	>60
Boom Length, ft (m)	4 (1.22)	15 (4.57)	15 (4.57)
Electrical Wavelength	.5	2.2	2.2
Longest Element, in (cm)	40.75 (104)	39.75 (101)	39.75 (101)
Turning Radius, ft (m)	4 (1.22)	8.9 (2.7)	10.4 (3.18)
Mast Size Range, in (cm)	1.25-2	1.5-2	1.5-2
	(3.2-5.1)	(3.8-5.1)	(3.8-5.1)
Wind Load, ft^2 (m^2)	.34 (.034)	1.8 (.17)	4.84 (.45)
Weight, lb (kg)	3 (1.36)	6.7 (.31)	21.5 (9.75)

MODEL	224WB	225WB
Frequency, MHZ	222-225	222-225
No. Elements	4	15
Forward Gain, dBd	10.2	15.5
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>5
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	60	2x17
H Plane	88	2x19
Side Lobe Attenuation,		
dB E Plane	40	60
Boom Length, ft (m)	3 (.91)	10 (3.05)
Electrical Wavelength	0.5	2.2
Longest Element, in (cm)	26.7 (68)	26.3 (67)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft^2 (m^2)	.23 (.021)	.95 (.09)
Weight, lb (kg)	1.7 (.77)	5.25 (2.4)



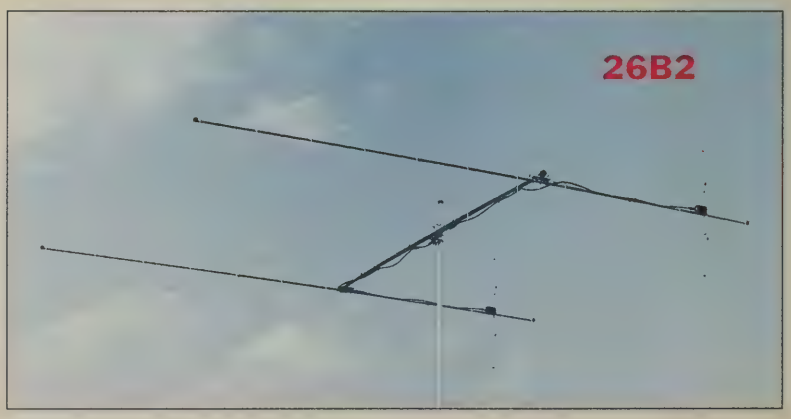


224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

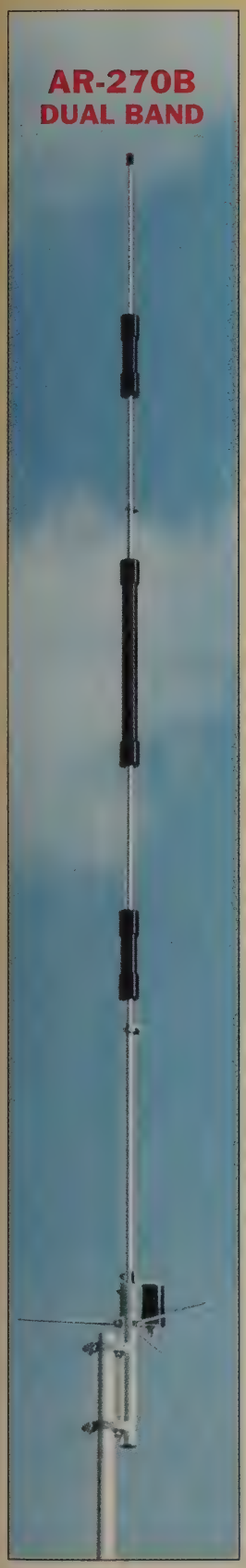
26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.



70 CM, 2 Meters

Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR-270B and the CS-270M mobile mag-mount. These great products will complement our already proven AR-270 dual band compact base antenna.



AR-270B 5.5/7.5 dB Dual Band Ringo

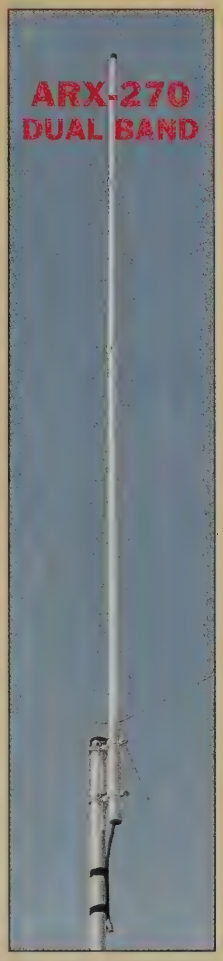
This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

MODEL	AR-270		AR-270B	
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dB	3.7	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		20 (51)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.47 (0.044)	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	

All-American Dual Band Ringo

Cushcraft's new ARX-270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.S. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional features like the factory installed pigtail feed and choice of UHF or N connector makes weather-proof connections easy. These technical innovations put the ARX-270 miles ahead. The All-American Dual Bander comes factory tuned and does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX-270.

- **ARX-270U** with UHF connector
- **ARX-270N** with N-connector



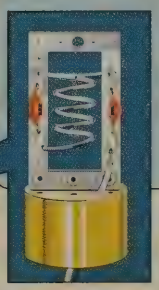
Experience the performance and appearance advantages of all-aluminum dual band antennas. Both models incorporate Ringo Ranger technology in lightweight and durable designs with stainless steel hardware. Their weather-sealed phasing coils and base matching networks eliminate stray RF currents while providing a very low angle of radiation. A simple 50 Ohm cable connection is all you need to experience the full performance of your dual band 2m/70cm transceiver.

AR-270 3.7 / 5.5 dB Dual Band Ringo

The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

Mount it anywhere from table top to roof top. You'll enjoy the performance.

The matching network coils for all Cushcraft dual band antennas are made from a very tough copper alloy. They're silver plated for greatest efficiency. The entire matching network is built on a PC board that surrounds the coil assuring that the antenna will not detune and will operate at peak efficiency for many years.



MODEL	ARX-270U/N	
Frequency, MHz	144-148	430-450
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>20
Gain, dB	9	12
Power Rating, Watts FM	200	200
Horizontal Radiation Pattern, Degrees	360	360
Height, ft, (m)	16.5 (5)	
Mast Size Range, in	1.25-2 (3.2-5.1)	
Radial Length, in (cm)	20.5 (52.1)	
Wind Load, ft2 (m2)	0.95 (0.088)	
Weight, lb (kg)	5 (2.3)	

NEW CS-270M

70 CM/2 M Mobile

The CS-270M offers the most gain possible in its compact size. It has 6 dB on 440 and 3.7 dB on 2 meters all in a 36-1/2" tall design. The small coil is insert molded into the center of the radiator. No moisture can penetrate the coil with this technique. The magnetic mount features a clinging 90 pound pull and a roof-protecting rubber pad. The feed line is double shielded Teflon® UltraLink Cable.™ Its low-loss, high temperature and designed to last. The CS-270M has all of the features you will need in a dual-band mobile antenna.

70 CM, 1¼, 2 Meters

Our Ringos are Number One.

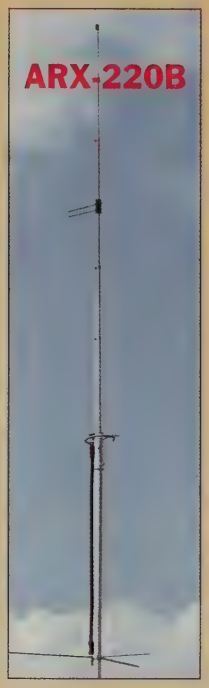
Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

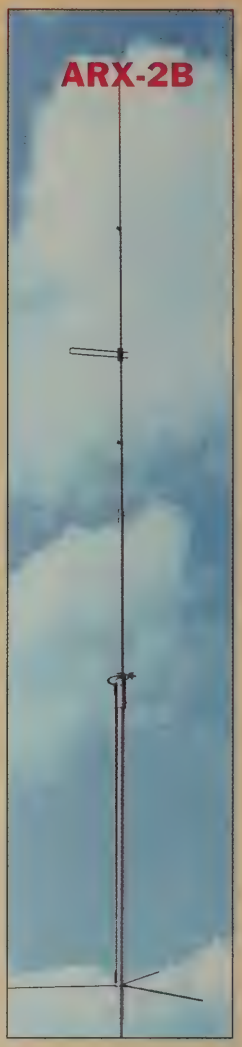
Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

MODEL	ARX-2B	ARX-220B	ARX-450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dB	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft, (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25	1.0-1.25	.75-.88
	(2.54-3.1)	(2.54-3.1)	(1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft^2 (m^2)	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)





Some hams comment on the ARX-2B:
"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX-2B...the best antenna." (XE2CLB)

MODEL	A270-10S		A270-6S	
Frequency, MHZ	144-148	430-450	144-148	430-450
No. Elements	5	5	3	3
Forward Gain, dBd	10	10	7.8	7.8
Front to Back Ratio, dB	20	18	20	18
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	≥4	≥10	≥4	≥20
Power Rating, Watts PEP	350	350	350	350
3dB Beamwidth, Degrees				
E Plane	52	52	66	66
H Plane	60	60	108	108
Boom Length, ft (m)	6.17 (1.9)		2.8 (.85)	
Longest Element, in (cm)	40.3 (102.4)		41 (104.1)	
Turning Radius, ft (m)	6 (1.8)		2.8 (.85)	
Mast Size Range, in (cm)	1.25-2		1.25-2	
	(3.2-5.1)		(3.2-5.1)	
Wind Load, ft^2 (m^2)	.725 (.07)		.3 (.02)	
Weight, lb (kg)	1.8 (.81)		1.7 (.8)	

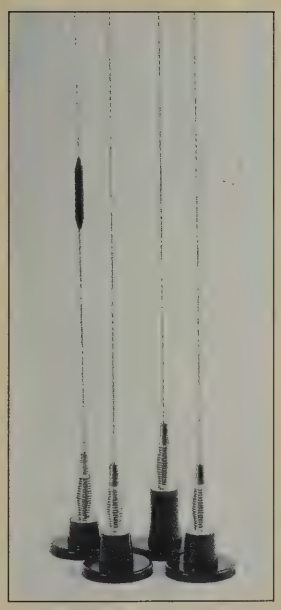
A270-10S and A270-6S
10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our fully illustrated assembly manuals. The A270-10S has nearly twice the performance of the A270-6S. Select the antenna for your station depending on the distance of your contacts.

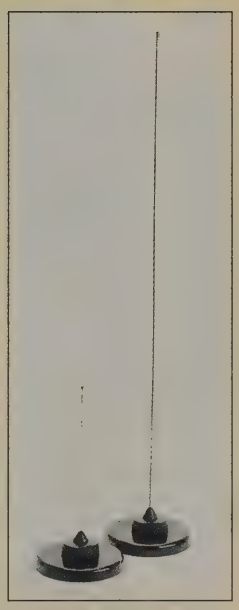
70 CM, 1¼, 2, 6, 10 Meters

Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



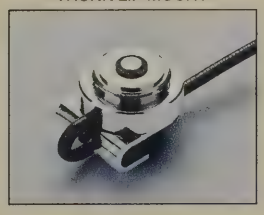
GAIN MOBILE ANTENNAS



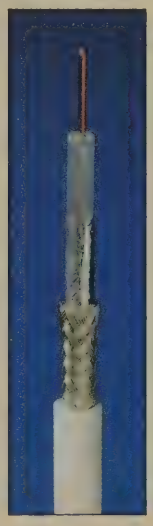
QUARTERWAVE MOBILES

BLACK MAG MOUNT

TRUNK LIP MOUNT



UltraLink Cable™



UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL-259 connector are included with the CS-28M.

Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar-metal joints. All Cushcraft mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft quarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

NEW CS-270M Dual-Band Mobile

See page 10 for a full description of this new 70cm/ 2 meter mag-mount mobile.

Model No.	Frequency MHz	Whip Length in	Whip Length m	Description
CS-270M	144-148/440-450	34	.86	Magnetic
CS-270A	144-148/440-450	34	.86	Coil & Whip
CS-147M	144-174	49	1.25	Magnetic
CS-147T	144-174	49	1.25	Trunk Lip
CS-147	144-174	49	1.25	3/4" Hole
CS-147A	144-174	49	1.25	Coil & Whip
CS-1147M	144-148	20	.5	Magnetic
CS-220M	222-225	33	.84	Magnetic
CS-220T	222-225	33	.84	Trunk Lip
CS-220	222-225	33	.84	3/4" Hole
CS-450M	435-470	29.5	.75	Magnetic
CS-450T	435-470	29.5	.75	Trunk Lip
CS-450	435-470	29.5	.75	3/4" Hole
CS-1450M	430-450	7	.17	Magnetic
CS-50M	46-54	49	1.25	Magnetic
CS-50T	46-54	49	1.25	Trunk Lip
CS-50	46-54	49	1.25	3/4" Hole
CS-28M	28-30	49	1.25	Magnetic

70 CM, 1¼, 2, 6, 10 Meters

cushcraft CORPORATION

Ringo Ranger

NEW ARX-6

The ARX-6 was developed to meet the needs of serious 6 meter FM hams. It has twice the gain of the standard AR-6. If your operating style requires the most gain and wide-area coverage from a repeater or home station, the ARX-6 is made for you.

ARX-2

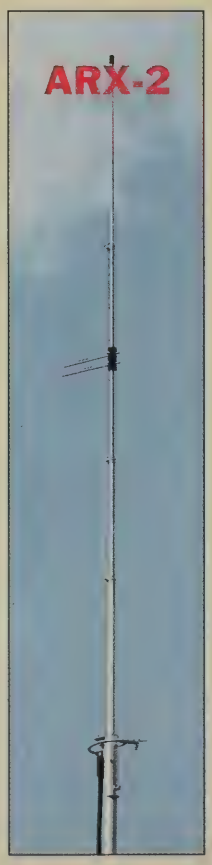
This is the 2 meter antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, the ARX-2 will do the job.

MODEL	ARX-6	ARX-2
Frequency, MHz	50-54	135-160
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>6
Gain, dB	5.5	5.5
Pwr Rating, Watts FM	1000	1000
Radiation Angle, Deg.	16	16
Horizontal Radiation Pattern, Degrees	360	360
Ring Diameter, in (cm)	13 (33)	5 (12.7)
Base Dia, in(cm)	2 (5.1)	1.5 (3.8)
Height, ft, (m)	24 (7.3	9.3 (2.8)
Mast Range, in (cm)	1.5-1.75 (3.8-4.4)	1-1.25 (2.54-3.2)
Wind Load, ft^2 (m^2)	1.9 (.18)	.33 (.03)
Weight, lb (kg)	7.5 (3.4)	4 (1.8)

Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR-2	AR-6	AR-10	AR-220	AR-450
Frequency, MHz	135-160	50-54	28-29.7	222-225	440-460
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	10	2	>1.5	10	20
Gain, dB	3.75	3.75	3.75	3.75	3.75
Power Rating, Watts FM	1000	1000	1000	500	500
Radiation Angle, Deg.	16	16	16	16	16
Horizontal Radiation Pattern, Degrees	360	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in(cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.75 (1.9)	.5 (1.3)
Height, ft, (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	2.6 (.78)	1.4 (.43
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft^2 (m^2)	.21 (.02)	.37 (.03)	1.68 (.16)	.21 (.02)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1.2 (.55)	1 (.45)



Four Pole Arrays

Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna. Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics. The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

MODEL	AFM-4DA	AFM-24DA	AFM-44DA
Frequency, MHz	144-148	222-225	435-450
Gain, dBd	9 Offset 6 Omni	9 Offset 6 Omni	9 Offset 6 Omni
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>5	>15
Power Rating, Watts FM	500	500	250
Radiation Angle Degrees	6	6	6
Horizontal Radiation Pattern, Degrees	360-Variable	360-Variable	360-Variable
Height, ft (m)	23 (7.0)	15 (4.5)	8 (2.4)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft^2 (m^2)	2.54 (.24)	1.85 (.17)	1.13 (.11)
Weight, lb (kg)	7 (3.2)	6 (2.7)	5 (2.3)

70 CM, 2 Meters

Performance and Value Leaders

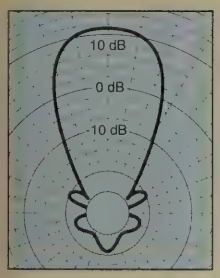
A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

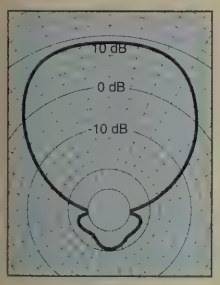
A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

Model	A148-3S	A148-10S	A148-20S
Frequency, MHz	144-148	144-148	144-148
No. Elements	3	10	20
Forward Gain, dBd	7.8	13.2	16.2
Front to Back Ratio, dB	25	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	≥4	≥4
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	66	40	20
H Plane	108	46	46
Boom Length, ft (meters)	2.8 (.85)	12(3.6)	12 (3.6)
Longest Element, in (cm)	41 (104.1)	40.3 (102.4)	40.3 (102.4)
Turning Radius, ft (m)	2.8 (.8)	6 (1.8)	6.6 (2.0)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft^2 (m^2)	0.27 (0.02)	1.21 (0.11)	2.82 (0.26)
Weight, lb (kg)	1.5 (0.7)	6 (2.7)	15 (6.8)

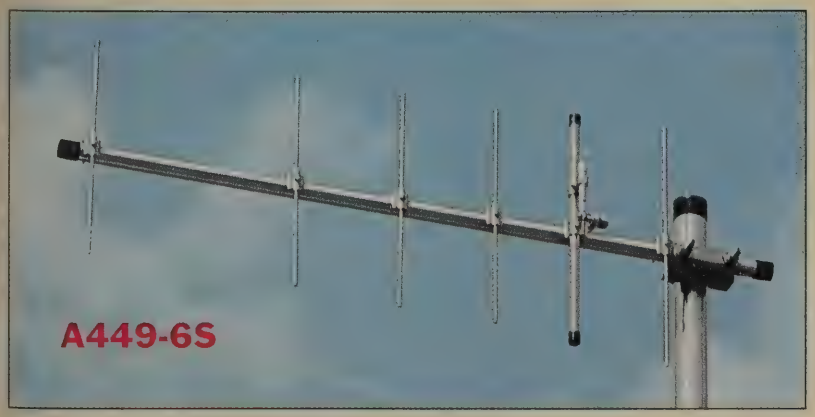


A148-10S



A148-3S

MODEL	A449-6S	A449-11S
Frequency, MHz	440-450	440-450
No. Elements	6	11
Forward Gain, dBd	10.5	13.2
Front to Back Ratio, dB	18	20
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>10	>10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	60	48
Boom Length, ft (m)	2.9 (0.89)	4.2 (1.35)
Longest Element, in (cm)	13 (33)	13 (33)
Turning Radius, ft (m)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-3.8)
Wind Load, ft^2 (m^2)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	3 (1.4)	4 (1.8)



Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

Antenna	Frequency MHz	Complete Kit	Harness Only
A148-3S	144.5-148	A14-VPKS	A14-SK
A148-10S	144.5-148	A148-VPKS	A148-SK
A449-6S	440-450		A449-SK
A449-11S	440-450	A449-VPKS	A449-SK

70 CM, 2 Meters

Reliable satellite communications will be yours with the new Cushcraft OSCAR antennas. The new 22XB two meter and 738XB 70 cm circularly polarized Boomer antennas offer the flexibility you need. Buy them both to create the best station possible or use a single antenna to upgrade an existing installation. Cushcraft provides polarization switches with both antennas. There are no additional options needed. Each antenna includes complete instructions on the mounting and installation of your OSCAR antenna system.

NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

NEW 738XB 70 CM OSCAR

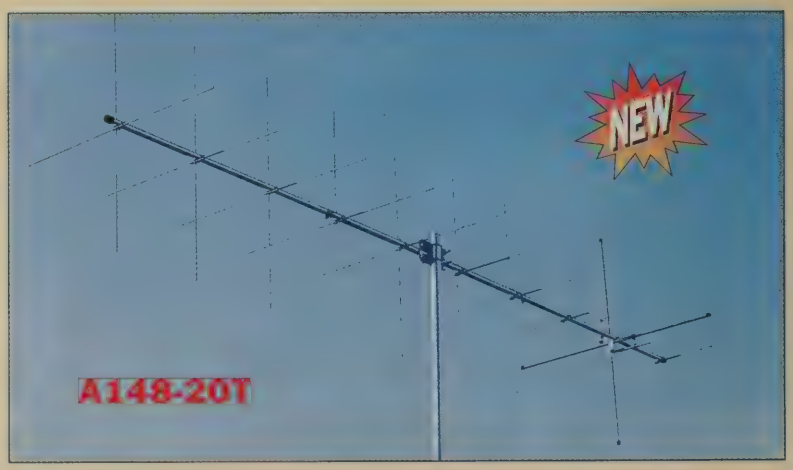
Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.

MODEL	22XB	738XB
Frequency, MHz	144-148	432-438
No. Elements	22	38
Forward Gain, dBdc	14	15.5
Front to Back Ratio, dB	25	25
Ellipticity dB at boresight	2	2
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	4	6
Power Rating, Watts PEP	600	250
3dB Beamwidth, Degrees		
E Plane	30	24
Boom Length, ft (m)	19.33 (5.9)	14.33 (4.37)
Longest Element, in (cm)	39.19 (99.6)	13.94 (35.4)
Turning Radius, ft (m)	11 (3.35)	8.5 (2.6)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.0)	1.5-2.0 (3.8-5.0)
Wind Load, ft^2 (m^2)	2.6 (.24)	1.4 (.13)
Weight, lb (kg)	11 (5)	7.6 (3.5)
Polarity switch	Included	Included

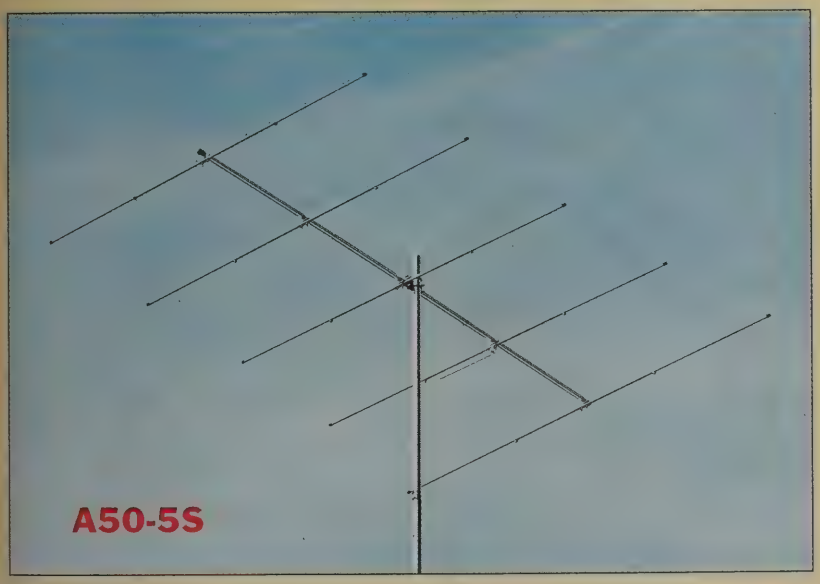
NEW A148-20T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

A148-20T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 ft^2 (.11m^2), and a mast size of 1.25-2 in. (3.2-5.1 cm).



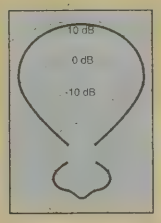
70 CM, 2, 6 Meters



6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

MODEL	A50-3S	A50-5S	A50-6S
Frequency, MHZ	50-54	50-54	50-54
No. Elements	3	5	6
Forward Gain, dBd	8	10.5	11.6
Front to Back Ratio, dB	20	24	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>1	>1
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	76	56	48
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft2 (m2)	1.80 (0.17)	2.9 (0.273)	4.46 (.41)
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)



A50-6S RADIATION PATTERN

70 CM / 2 Meters

A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

MODEL	A144-7S	A148-10S	A430-11S
Frequency	144-146	144-148	430-435
No. Elements	7	10	11
Forward Gain, dBd	11.1	13.2	13.2
Front to Back Ratio, dB	20	24	20
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	≥4	>10
Power, Watts PEP	1000	1000	350
3dB Beamwidth, Deg.			
E Plane	46	40	38
H Plane		46	
Boom Length, ft (m)	8.2 (2.5)	12 (3.6)	4.7 (1.40
Longest Element, in (cm)	40 (101.6)	40.3 (102.4)	14 (35.5)
Turning Radius, ft (m)	4.9 (1.5)	6 (1.8)	2.6 (.81)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.1-3.8)
Wind Load, ft^2 (m^2)	0.81 (0.08)	1.21(0.11)	0.42 (.04)
Weight, lb (kg)	4 (1.8)	6 (2.7)	3 (1.4)

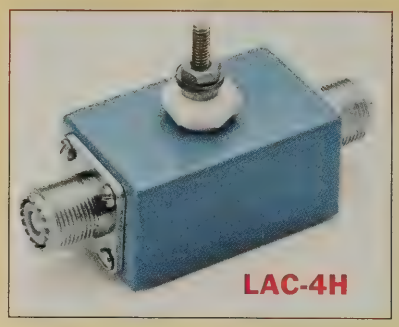
Accessories

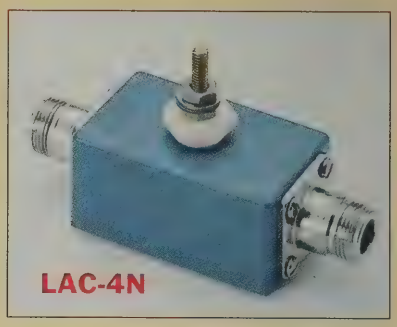
Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds-much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

LAC4	200 Watt with UHF SO-239 connectors
LAC4H	2 kW with UHF SO-239 connectors
LAC4N	200 Watt with N connectors
LAC4NH	2 kW with N connectors
LC2	200 Watt replacement cartridge
LC2KW	2 kW replacement cartridge



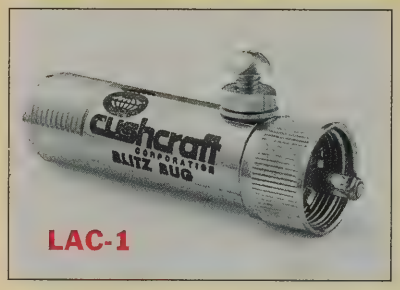


Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

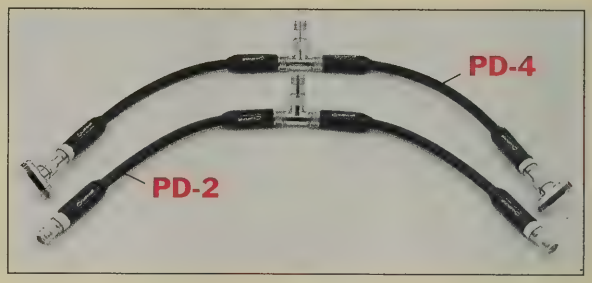
LAC-1	with UHF PL-259 and SO-239 connectors
LAC-2	with UHF SO-239 connectors



Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

PD-2	for two 13B2, 124WB
PD-2N	for two 17B2
PD-4	for four 13B2
PD-4N	for four 17B2
PD-222	for two 220B, 224WB or 225WB
PD-224	for four 220B, 224WB or 225WB



Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

617-SK	for two 617-6B's
22-SK	for two 13B2's
22N-SK	for two 17B2's

One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

All Cushcraft antennas are available through dealers worldwide.

BOOMER STACKING INFORMATION

Antenna	2x617-6B	2x13B2	4x13B2	2x220B	4x220B	2x424B	4x424B	2x17B2	4x17B2
Forward Gain, dBd	17.0	18.8	21.8	19.8	22.4	20.8	23.4	21.0	24.0
Front/Back Ratio	30	24	24	30	30	30	30	24	24
E-Plane Beamwidth,deg	2x17.5	2x18	2x9	2x13	2x6.5	2x9.5	2x4.8	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7	2x5.5	2x5.5		2x7.5	2x7.5
Vert, ft	26	9.2	9.2	8	8	5	5	11.5	11.5
(m)	7.92	2.8	2.8	2.44	2.44	1.97	1.97	3.5	3.5
Horiz, ft	-	-	9.6	-	8.5	-	5.5	-	12
(m)	-	-	3.0	-	2.59	-	2.16	-	3.7
Approximate Wt, lb	62	22	44	23	76	15	55	32.5	115
(kg)	28.12	10.00	20.00	10.40	34.40	7.62	24.95	14.8	52.3

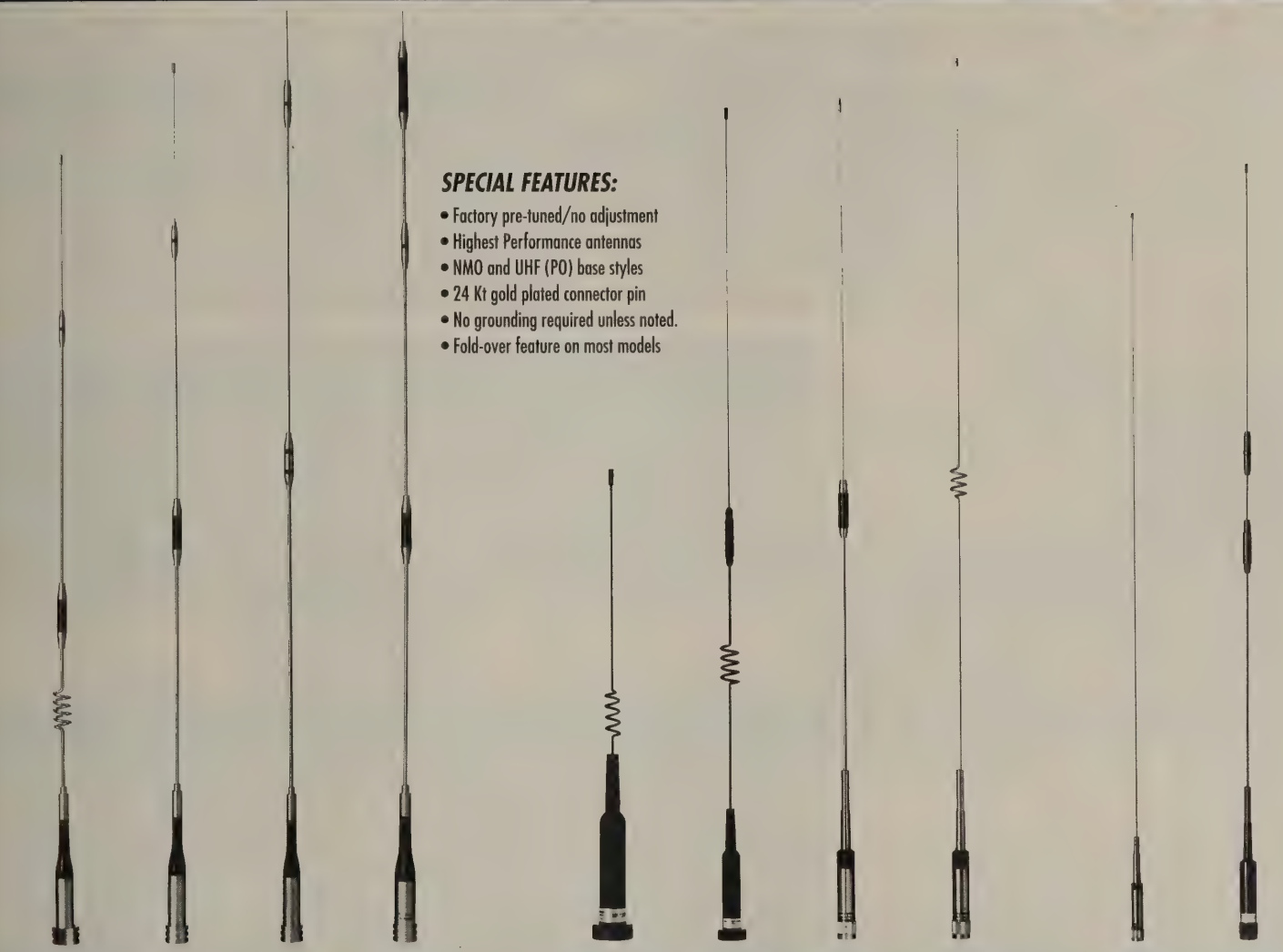
DIAMOND'S STATE-OF-THE-ART VHF/UHF MOBILE ANTENNAS—MAXIMUM PERFORMANCE WITHOUT COMPROMISE!

You've seen the rest...now own the BEST!

DIAMOND ANTENNA

SPECIAL FEATURES:

- Factory pre-tuned/no adjustment
- Highest Performance antennas
- NMO and UHF (PO) base styles
- 24 Kt gold plated connector pin
- No grounding required unless noted.
- Fold-over feature on most models



SG7200NMO SG7500 SG2000 SG7900 NR72BNMO NR73BNMO NR770R NR770H CR214S CR320A

MODEL	BAND	GAIN (dBd.)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
NR72BNMO[6]	2m/70cm	2.15	100	NMO	13.8	1/4λ, 1/2λ
NR73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2λ, 1-5/8λ
NR770SA[6]	2m/70cm	2.15/2.15	100	UHF	16.9	1/4λ, 1/2λ
NR770HA[7]	2m/70cm	3.0/5.5	200	UHF	40.2	1/2λ, 2-5/8λ
NR770HNMO[8]	2m/70cm	3.0/5.5	200	NMO	38.2	1/2λ, 2-5/8λ
NR770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2λ, 2-5/8λ
NR790A*	2m/70cm	4.5/7.2	120	UHF	57.5	6/8λ, 3-5/8λ
SG7000[6]	2m/70cm	2.15/3.8	100	UHF	18.5	1/4λ, 6/8λ
SG7200NMO	2m/70cm	3.2/5.7	150	UHF	36.6	1/2λ, 2-5/8λ
SG7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2λ, 2-5/8λ

1/4λ antennas rated in dBi.

MODEL	BAND	GAIN (dBd.)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
SG7900*	2m/70cm	5.0/7.6	150	UHF	62.2	7/8λ, 3-5/8λ
SG2000*	2m	5.2	150	UHF	62.6	7/8λ
SG6000NMO[6,9]	6m	2.1	150	NMO	39	1/4λ
NR140A	1-1/4m	3.8	100	UHF	36.2	5/8λ
NR124	23cm	8.4	100	N	25	4-5/8λ
CR214S[6]	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2λ, 5/8λ
CR224A*[6]	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8λ, 2-5/8λ
CR320A[6]	2m/1-1/4m/ 70cm	2.15/3.8/ 5.5	200/ 200/100	UHF	37.4	1/4λ, 1/2λ, 2-5/8λ
CR627B[6,9]	6m/2m/ 70cm	2.1/4.5/ 7.2	120	UHF	60	1/4λ, 1/2+1/4λ/ 3-5/8λ
NR2000NA	2m/70cm/ 23cm	3.15/6.3/ 9.7	100	N	39	1/2λ, 2-5/8λ 5-5/8λ

* Not recommended for Magnet Mount
[6] Grounding required.
[7] NR770HB same specifications but in black finish.
[8] NR770HBNMO same specifications but in black finish.
[9] 50MHz antennas adjustable

FOLD-OVER

Patented One-Touch Fold-over Feature
(Not available on NR72BNMO, NR73BNMO or NR770SA.)

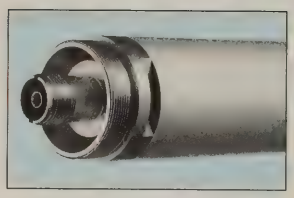
DIAMOND ANTENNAS—
THE STANDARD BY WHICH ALL OTHERS ARE JUDGED

Acclaimed as the technological leader in single & multiband antennas

• Wide-band Performance • Factory Adjusted–No Tuning Required • Highest Gain
• UPS Shippable • High Wind Rating • Fiberglass Radome • DC Grounded • Stainless Hardware

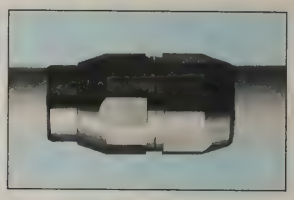
X500HNA

RUGGEDIZED BASE/REPEATER ANTENNA



COAX CONNECTION AT BASE END

HEAVY DUTY BASE/ RADIAL ASSEMBLY



STRONG JOINT COUPLINGS

147MHz

445MHz

Radiation patterns for X500HNA/X510MA/X510NA

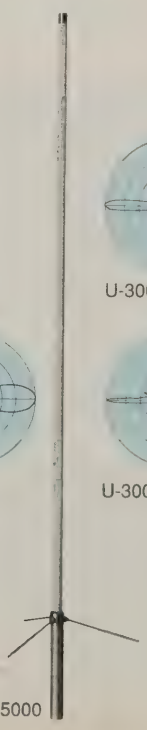
X510

U-300A 440MHz

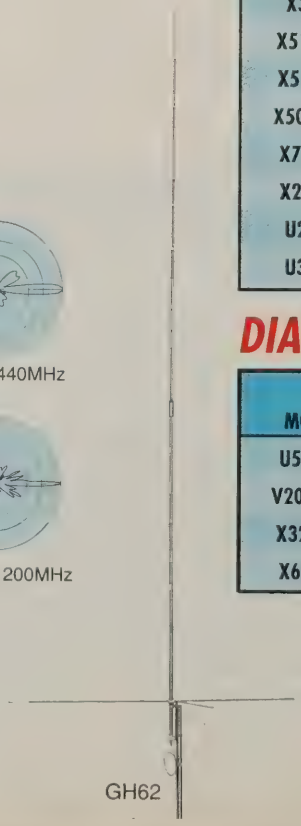
F-22

U-300A 1200MHz

F22



U5000



GH62

DIAMOND Mono-band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dBd.)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No Ice)
DPGH62[1]	50	6.0	200	UHF	21.0	78
F22A	144	6.7	200	UHF	10.5	112
F23A	144	7.8	200	UHF	15.0	90
F142A	222	5.5	200	UHF	6.0	110
F718A[2]	440	11.5	250	N	15.0	110
F1230A	1240	13.5	100	N	10.5	90

DIAMOND Dual-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dBd.)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No Ice)
X50A	144/440	4.5/7.2	200	UHF	5.6	135
X200A	144/440	6.0/8.0	200	UHF	8.3	112
X300A	144/440	6.5/9.0	200	UHF	10.2	112
X510NA[3]	144/440	8.3/11.7	200	N	17.2	90
X510MA	144/440	8.3/11.7	200	UHF	17.0	90
X500HNA	144/440	8.3/11.7	200	N	17.8	90+
X700HA	144/440	9.3/13.0	200	UHF	24.0	90
X2200A	144/222	6.0/7.8	150	UHF	11.5	112
U200A	440/1240	8.3/11.7	100	N	5.9	135
U300A	440/1240	8.6/13.2	100	N	8.3	110

DIAMOND Tri-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dBd.)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No Ice)
U5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V2000A[1,4]	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110
X3200A[5]	144/222/440	6.0/7.8/8.0	100/200	UHF	10.5	112
X6000A	144/440/1240	6.5/9.0/10.0	100/100/60	N	10.5	112

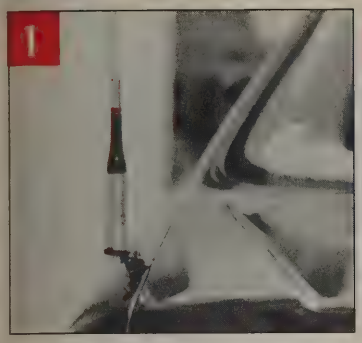
BAND: 144=144-148MHz., 222=222-225MHz., 420=420-430MHz. 430=430-440MHz., 440=440-450MHz., 1240=1240-1300MHz.

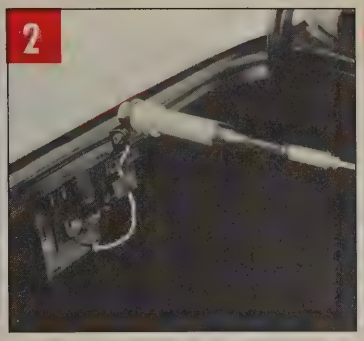
Mast requirement: 1.4"-2.4".

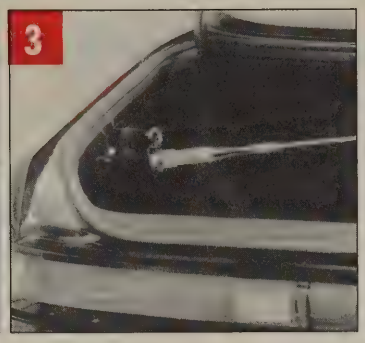
[1] 50 MHz antennas are adjustable
[2] F-718A: 440-450MHz., F-718J: 430-440MHz., F718L: 420-430MHz.
[3] X510NJ: 144-147/430-440MHz.
[4] 1/4λ rated in dBi.
[5] 2m: 146-148

PREMIUM GRADE ANTENNA MOUNTS AND DUPLEXERS/TRIPLEXERS BY DIAMOND

Designed for today's high performance antennas







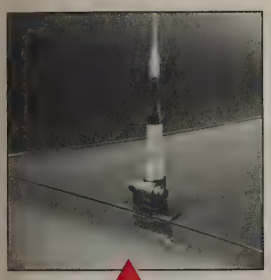
DIAMOND'S NEW HIDE-AWAY ANTENNA MOUNT

As easy as 1, 2, 3—the new K601 Hide-away Mount folds antenna safely into the trunk. Fully adjustable, fits most vehicles.

Color: Black. Choice of NMO or UHF base.

Recommended antennas: NR73BMNO, NR770HNMO, NR770HBNMO, SG7200NMO, NR770HA, NR770HB, NR770RA & SG7500A.

K601NMO—NMO Base
K601M—UHF Base



K400 HATCHBACK/DOOR/TRUNK LID MOUNT

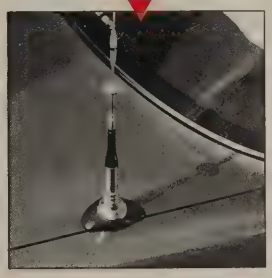
Diamond's deluxe heavy duty mount. Two-axis adjustable. Recommended for high gain VHF/UHF antennas.

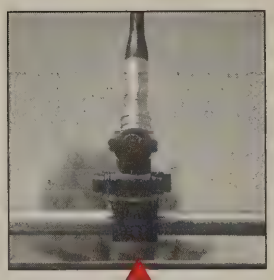
K400M	SO-239 base, 16.5' cable & PL-259 conn.
K400NMO	NMO base, 16.5' cable & PL-259 conn.
K400K-3/8M	3/8 x 24 thread, cable & PL-259 conn.

K600 VARIABLE ANGLE TRUNK MOUNT

Deluxe aerodynamic trunk mount. Vertical adjustment range 0-9%. Four set screw, stainless steel mount assembly.

K600M	SO-239 base, 16.5' cable & PL-259 conn.
K600N	Type N base, 16.5' cable & type N conn.
K600P	SO-239 base, 16.5' cable & type N conn.





K540 MIRROR/LUGGAGE RACK MOUNT

Adjustable Mirror/luggage rack mount accepts 1/2" to 7/8" tubing. Fits most mirrors and utility racks.

K540KM	SO-239 base, 16.5' cable & PL-259 conn.
K540	Mount Only

K550 LUGGAGE RACK MOUNT

Adjustable luggage rack mount for new mini-vans.

K550M	SO-239 base, 16.5' cable & PL-259 conn.
K550	Mount Only

PREMIUM MAGNET MOUNT BASE

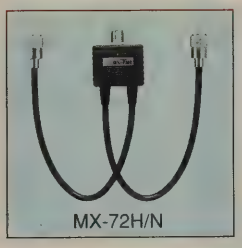
Heavy duty 2.2 lb./4" magnet mount. Rated 25-500MHz. Recommended for antennas under 45".

SPM-35	SO-239 base, 13' cable & PL-259 conn.
DP-SPM/58U	SO-239 base, 13' cable & PL-259 conn.
DPK-4NM-M	SO-239 base, 13' cable & type-N conn.
DPK-4NM-N	Type- N base, 13' cable & Type-N conn.

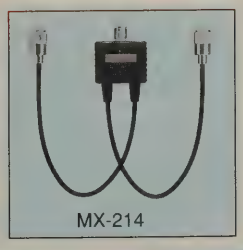
DUPLEXERS AND TRIPLEXERS FOR COMBINING AND SPLITTING VHF/UHF FREQUENCIES

• Lowest loss • Maximum Band Isolation • Low VSWR

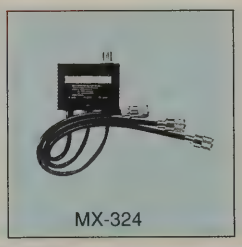
MX-72D/DN



MX-72H/N

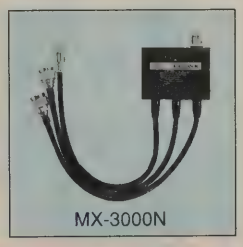


MX-214



MX-324

MX-3000D/DN



MX-3000N

MODEL	MX37	MX72D	MX72DN	MX72H	MX72N	MX72J	MX214	MX214D	MX324	MX324D	MX2000	MX2000D	MX3000	MX3000N	MX3000D	MX3000DN
FREQUENCY BAND (MHz)	1.6-470 900-1300	LPF 1.6-30		140-150	HPF 400-460		140-150 220-225		LPF 1.5-150	BPF 220-225	HPF 400-550	LPF 1.6-160	BPF 350-500	HPF 850-1300	LPF 1.6-160	BPF 350-500	HPF 850-1300
PWR CW (ICAS)	100/50	400		150	100	400	150/100							400	200	100
WATTS P.E.P.	200/100	1000		400	250	800	300/200		800	600	500	800	800	500	800	400	200
THRU LOSS/dB	0.25/0.45	0.15		0.15	0.25		0.3/0.4		0.3	0.4	0.4	0.15	0.2	0.25	0.2	0.3	0.4
ISOL	45dB	60dB					45dB		40-50dB			60dB			55dB		
VSWR	1.2:1	1.2:1					1.2:1		1.2:1			1.2:1			1.2:1		
CONNECTOR COMPLEMENT	(N) MIX 430 1200 (M) (N)	(M) MIX 144 430 (M) (M)	(M) MIX 144 430 (M) (N)	(M) MIX 144 430 (M) (M)	(M) MIX 144 430 (M) (N)	(M) MIX 144 430 (M) (M)	(M) MIX 144 220 (M) (M)	(M) MIX 144 220 (M) (M)	(M) MIX 144 220 430 (M) (N) (M)	(M) MIX 144 220 430 (M) (M) (M)	(M) MIX 50 144 430 (M) (M) (M)	(M) MIX 50 144 430 (M) (M) (M)	(N) MIX 144 430 1200 (M) (N) (N)	(N) MIX 144 430 1200 (M) (N) (N)	(N) MIX 144 430 1200 (M) (M) (N)	(N) MIX 144 430 1200 (M) (N) (N)
CONNECTOR	12" Cable w/ Connectors	Direct		12" Cable w/Connectors		Direct all SO-239	12" Cable w/Connectors	Direct	12"Cable w/Connectors	Direct	12" Cable w/Connectors	Direct	12" Cable w/Connectors		Direct	

NOTE: Connectors shown as "M" are low loss equivalent of SO-239 & PL-259. Connectors shown as "N" are standard Type-N.

GAP: THE PERFECT ANTENNA

We at GAP realize there isn't a perfect antenna. No singular antenna will scream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.

Eagle DX

Challenger DX

Voyager DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the **ENTIRE BAND**.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

A GAP antenna has no traps, coils or transformers. This is important. The greatest sources of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

CQ–"The GAP consistently outperformed base-fed antennas...and was quieter."

73–"This is a real DX antenna, much quieter than other verticals."

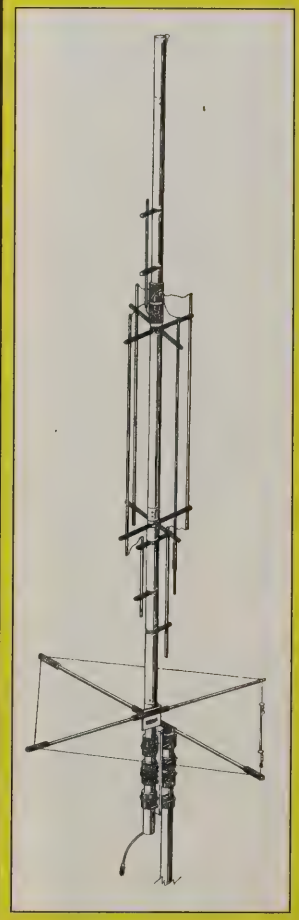
RF–"To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP, there was no comparison. Signals were always stronger on the GAP, sometimes by S units, not just DB's."

Worldradio – "These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if is fed in the center."

IEEE–"Near field and power density analyses show another advantage of this antenna (asymmetric vertical dipole): it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."

MODEL	BANDS OF OPERATION											HT	WT	MOUNT	COUNTER-POISE	COST
	2m	6m	10m	12m	15m	17m	20m	30m	40m	80m	160m					
Challenger DX	■	■	■	■	■		■		■	■		31.5'	21 lbs	Drop In Ground Mount	3 Wires @ 25'	$259
Eagle DX			■	■	■	■	■		■			21.5'	19 lbs	1-1/4" pipe	80" Rigid	$269
Titan DX (Just Released)			■	■	■	■	■	■	■	■		25'	25 lbs	1-1/4" pipe	80" Rigid	$289
Voyager DX							■		■	■	■	45'	39 lbs	Hinged Base	3 Wires @ 57'	$399

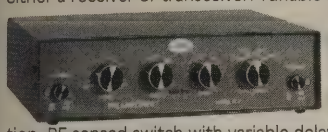
New Release: **TITAN DX**



This all purpose antenna is designed to operate 10m-80m, WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

AMECO ACCESSORIES BOOKS CODE COURSES

▶PT-3 Preamplifier Covers 160 thru 6 meters, useable with either a receiver or transceiver. Tunable low noise dual gate FET circuit provides more than 20dB gain with low noise figure and improved spurious and image rejection. RF sensed switch with variable delay automatically bypasses to the antenna on transmit. Second receiver and antenna capability. 12V DC. 2½"h x 8¾"w x 6½"d **$119.95**

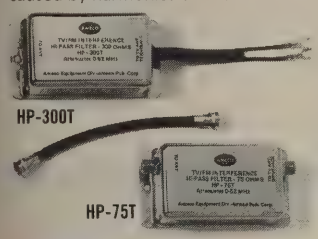


▶P-12T AC adapter for PT-3 ..... **$9.95**

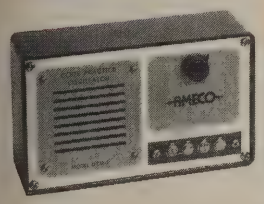
▶TPA Tunable Preamplifier/Active Antenna Can be used as a preamplifier to improve the gain of a receiver, or as an indoor active antenna. Covers 0.22 to 30MHz in 5 bands. Dual-gate FET provides an excellent noise figure and over 20 dB gain. Matches most antennas – long wire, 300Ω and random lengths can be used with good results. With no external antenna the supplied 30" whip antenna gives good results in outside antenna as a tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Requires 9V battery or AC adapter.1½ "h x 8"w x 6½"d ..**$69.95**

▶P-9T AC adapter for TPA **$9.50**

High Pass Filters Stop TV, FM and VCR interference caused by harmonics or overload from amateur transmissions, etc. Installs at TV or VCR antenna terminal. or connector. Sharp frequency cutoff at 52MHz with 70dB attenuation below 50MHz. Models for 75Ω or 300Ω TV antenna lead-ins or 75Ω cable systems.



▶Model HP-300T (300Ω) • **▶HP-75T** (75Ω) ..... each **$12.95**

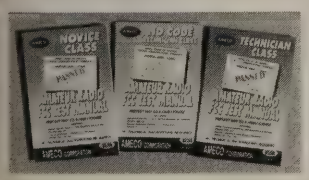


▶OCM-2 Combination Code Practice Oscillator and CW Monitor with volume control, 3" speaker, and headphone terminals. Requires a code key and 9V battery.
Kit **$19.95** • Wired **$24.95**

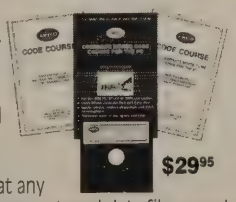
▶K-1 Low-cost general purpose key with phenolic base, adjustable tension and contact spacing... **$9.95**

▶K-4 Deluxe high quality key. Polished brass base, and shorting bar **$14.95**

FCC Test Manuals New revised editions Incorporating all the latest changes in FCC amateur radio test preparation requirements. Separate manuals are available for the Novice, Technician and the New No-Code Technician Classes All current FCC examination questions for each class, with corresponding multiple choice answers. See AMECO in the Price List



▶107-PC-2 Complete Morse Code Course for IBM PC/XT/AT or compatible. Menu driven, contains over 18 options. Generates random characters, numbers and punctuation at any speed and tone. Generates infinite random QSO's–similar to FCC/VEC exams at any speed and tone. Sends text from any external data file, more!

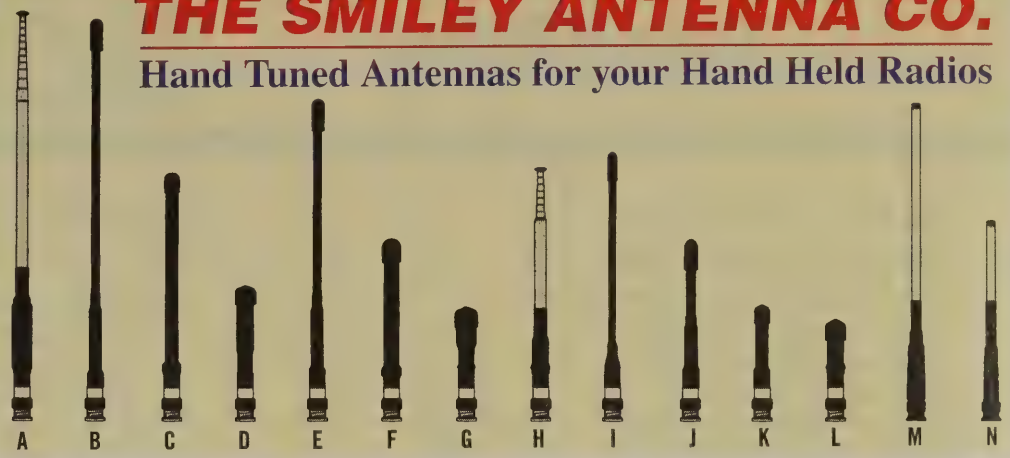


$29.95

See Price list for more AMECO Publications & Code Courses

THE SMILEY ANTENNA CO.

Hand Tuned Antennas for your Hand Held Radios



Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane – No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

▶THIN STICK 1/4 wave telescoping dual band antenna for 144 and 220MHz bands ..... **(TS) $16.95**

▶SUPER STICK II (A) 2 meter, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended (54"); usable fully collapsed, or one section 1/4 wave. Length: 54" extended, 10" collapsed ..... **(SS-II) $19.95**

▶SUPER STICK II COMBO As above but includes a 2 meter Stubby Duck antenna (D) ..... **(SS-II/COMBO) $26.95**

▶5/8 SLIM DUCK (B) 2-meter, 5/8-wave, 7db gain, flexible base loaded antenna. 12" long ..... **(5/8 SLD-2) $17.95**

▶5/8 SLIM DUCK COMBO As above, but includes a 2 meter Stubby Duck antenna (D) ..... **(5/8 SLD-2 COMBO) $24.95**

▶REGULAR DUCK (C) For 2 meters. Tuned Ducks show a 3db gain over other Rubber Ducks because they are impedance matched for hand-helds. ..... **(RD-2) $14.95**

▶STUBBY DUCK (D) Tuned, efficient, for 2M **(RDS-2) $14.95**

▶SUPER STICK III 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one section 1/4 wave. 36" extended, 8¾" collapsed **(SS-III) $19.95**

▶SUPER STICK III/COMBO As above but includes a 220MHz Stubby Duck antenna (G) ..... **(SS-III/COMBO) $26.95**

▶5/8 SLIM DUCK (E) 220MHz, 7db gain, flexible base loaded antenna. Length: 9" ..... **(5/8 SLD-220) $17.95**

▶5/8 SLIM DUCK COMBO As above, but includes a 220MHz Stubby Duck (G) ..... **(5/8 SLD-220 COMBO) $24.95**

▶REGULAR DUCK (F) Tuned for 220MHz ... **(RD-220) $14.95**

▶STUBBY DUCK (G) Tuned for 220MHz ..... **(RDS-220) $14.95**

▶SUPER STICK IV (H) 440MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed. 18" extended, 5¾" collapsed ..... **(SS-IV) $19.95**

▶SUPER STICK IV COMBO As above, but includes a 440MHz Stubby Duck (K) ..... **(SS-IV/COMBO) $26.95**

▶SLIMLINE (I) 440MHz, 1/4-wave flexible ant **(SL-440) $12.95**

▶5/8 SLIM DUCK (J) 440MHz, 7db gain, flexible base loaded antenna. Length: 5" ..... **(5/8 SLD-440) $17.95**

▶5/8 SLIM DUCK COMBO As above, but includes a 440MHz Stubby Duck (K) ..... **(5/8 SLD-440 COMBO) $24.95**

▶STUBBY DUCK (K) Tuned for 440MHz .... **(RDS-440) $14.95**

▶MINI DUCK (L) Tuned for 440MHz ..... **(RDMD-440) $14.95**

▶FLEX-COIL (M) 2 meter, 1/2-wave, 7-9 dB gain, flexible base 35" fully extended ..... **(FLX 1/2 WAV2M) $25.95**

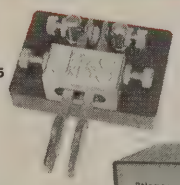
▶270A (N) Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440 MHz) **$19.95**

▶TAQ 1/4-wave whip, specify **2M, 220** or **440MHz** **$10.95**

There's a Smiley for your every need!

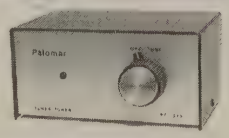
PALOMAR Engineers

▶PK-200 Dual Paddle Key for iambic keyers Precision made by Jones of England and imported by Palomar. Smooth solid iambic action by rotary ball bearings enclosed in a machined brass block on steel base. Adjustable spring tension, paddle height and paddle spacing. Gold-plated contacts, engraved serial # **$159.95**

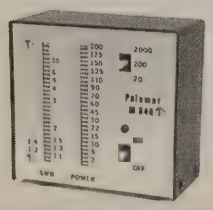


More Palomar products... see Price List & Index

▶PT-340 Tuner-Tuner Eliminate QRM and overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Turn it on, and listen to the noise output in your receiver, adjust your station tuner for a dip in the noise (null); that's it! Covers 1.7 to 30MHz. Requires 9V battery. 6"w x 5"h x 3"d **$99.95**



▶M-840 SWR & Power Meter Two 30-segment LED displays show PEP or average power and SWR instantaneously and simultaneously, without calibration – just select the proper power range. Covers 1 to 30MHz with 2, 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Remote sensor with 6 ft. cable. Requires 10-15 VDC @ 800ma. 4¼"w x 4¼"h x 2¼"d, 1 lb. **$189.95**

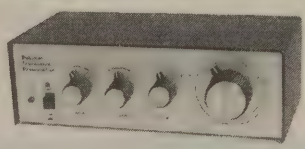


▶RX-100 Noise Bridge Just one measurement tells if your antenna is resonant, and if not, whether it is too long or too short. Shows resistance and reactance of coax fed antennas from 1–100MHz. Install between receiver and feedline. Tune receiver to frequency and adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters and tuners, and to adjust tuned circuit resonance. Uses 9V battery. 5¾"w x 3"d x 1¼"h **$79.95**

▶ SMB-5 Software program for AT-compatible computers. Uses RX-100 noise bridge readings taken at the transmitter to compute and plot antenna resistance, reactance and SWR. On 3-1/2" disk with manual **$29.95**

▶SB-4 Balun Matches 50Ω to 200Ω. For high SWR applications in multi-band dipoles, tuners, open wire line to coax conversions. Covers 1.7–30MHz, rated for 6KW PEP or 2KW CW up to 10:1 SWR. Teflon insulation, epoxy encapsulated, stainless steel eyebolt on top for support. 4"dia. x 4" high, 2 lb **$79.95**

P-410X/412X Preamplifiers for Transceivers Covers 160-6M in 4 ranges. Installs between transceiver and antenna. Improves reception with a high-quality preamplifier with adjustable gain up to 20dB. It provides lower noise figure, better selectivity and overload capability. Automatic bypass switching to antenna on transmit. 3"h x 8½"w x 5"d. **▶Model P-410X** (115V) or **▶P-412X** (12V) ..... each **$169.95**



VHF and UHF Fixed Station Vertical Antenna

Model G6-270R Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged and Solid fiberglass construction.
Optimum Gain and Wide Bandwidth. Consists of 5/8 λ over 5/8 λ on 2M and 4 x 5/8 λ on 440 MHz.

- Length: 7ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Mounting: 1-1/4" - 1-1/2" mast
- Max Power: 100 watts
- Gain: 6dBd VHF & UHF
- Bandwidth: 1.5:1 SWR
  2 MHz.- 2 Meters
  10 MHz.- 440 MHz.
- Feed: Shunt, DC ground
- Connector: N female

Model G6-440 Omnidirectional Fixed Station

Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

ELECTRICAL

- Maximum power input: 250 watts
- Gain: 6 dB
- Bandwidth: 8 MHz. under 1.5:1 SWR
- Impedance: 50 ohm nominal
- Lightning protection: direct ground
- Termination: Type N female

MECHANICAL

- Length: 87"
- Weight: 5 lbs.
- Wind survival: 125 mph.
- Mounting: up to 2" mast

G6-144B Two Meter Antenna Omnidirectional Fixed Station

6dB GAIN - compared to 1/2 wave dipole.

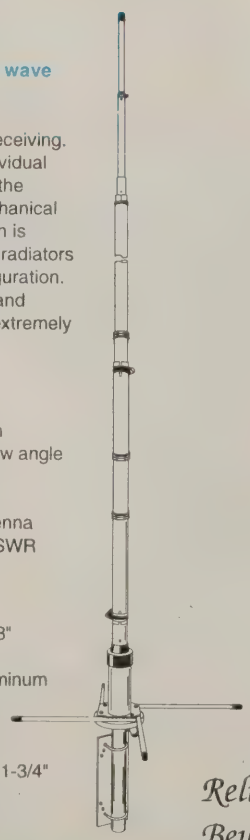
Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wave-length radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle.

ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Maximum radiation - extremely low angle
- 50 ohm feed impedance
- Field adjustable: 140-150 MHz.
- SWR at resonance: 1.2:1 at antenna
- Bandwidth : 4 MHz. under 2:1 VSWR
- Shunt-fed with D.C. grounding

MECHANICAL

- Vertical element: 117" long, 1-1/8" telescopic to 3/8"
- Constructed of high strength aluminum
- Connector: SO-239
- Wind load: 26 lbs. @ 100 mph.
- Completely self-supporting
- Mounting: Vertical support up to 1-3/4"
- Shipping wt: 6.8 lbs.



G7-144 Two Meter Antenna Omnidirectional Fixed Station

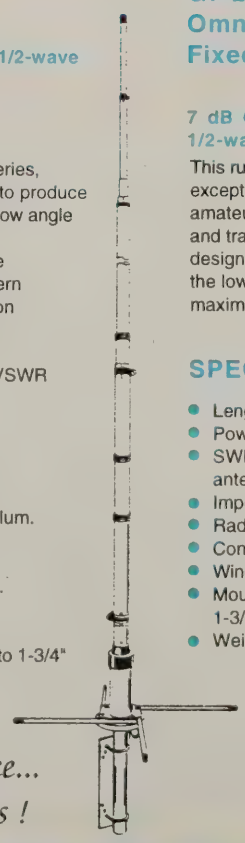
7 dB GAIN - compared to 1/2-wave dipole.

ELECTRICAL

- Radiator: Collinear shunt-fed. Triple 5/8-wave elements in series, seperated by 2 phasing coils to produce maximum gain and extremely low angle of radiation.
- 7 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz.
- VSWR: 1.2:1 at resonance
- Bandwidth: 4 MHz. under 2:1 VSWR
- Power: 600 watts
- 50 ohm feed inpedance
- Shunt fed with DC grounding

MECHANICAL

- High strength fiberglass and alum.
- Completely self-supporting
- Length: 184"
- Radials: (4) 20-1/4" x 3/8" O.D.
- Connector: N-type
- Wind load: 26 lbs. @ 100mph.
- Mounting: Vertical support up to 1-3/4"
- Weight: 10 lbs.



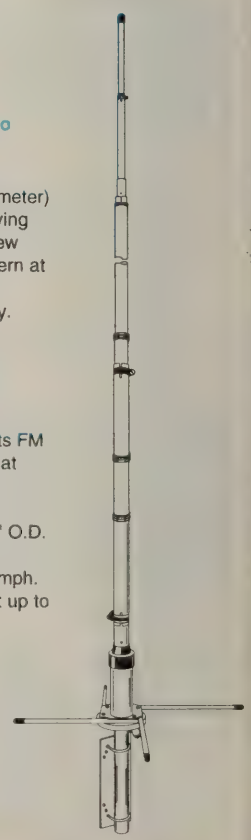
G7-220 Omnidirectional Fixed Station

7 dB GAIN - compared to 1/2-wave dipole.

This rugged antenna means exceptional 220 MHz (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle of maximum radiation efficiency.

SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
- SWR at resonance: 1.2:1 at antenna
- Impedance: 50 ohms
- Radials: (4) 14-3/4 x 3/16" O.D.
- Connector: Type N
- Wind load: 26 lbs. @ 100 mph.
- Mounting: vertical support up to 1-3/4" O.D.
- Weight: 7 lbs.



Reliability & Performance...
Beyond your Expectations !

VHF and UHF Mobile Antennas

FX Series

- 3.4 dB gain; 5/8 λ, 200 watt rating
- 15 feet of coax with PL-259 connector
- Magnetic mount holds to 100 mph.

Model FX-2
2 meter, black and chrome
Model FX-220
220 MHz., black and chrome
Model FX-2B
2 meter, all black
Model FX-220B
220 MHz. all black

RX Series

- 3.4 dB Gain; 5/8 λ, 100 watt rating
- 15 foot of coax with PL-259 connector
- Magnetic mount holds to 75 mph.

Model RX-2
2 meter, black and chrome
Model RX-220
220 MHz. black and chrome

Model BBLT-144A

3.4 dB Gain Trunk-Lip Mount Antenna

- Adjustable 143-149 MHz.
- SWR: 1.1:1 at resonance
- Power rating: 200 watts FM
- Shunt-fed • Reduced static
- Length: 4'4" inc. mt. • Spring and 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required

Model BBL-144A

3.4 dB Gain Roof Mount Antenna
Same as **BBLT-144A** but mounts in 3/4" hole on a flat surface. 17' coax with connectors.

Model SF-220

Low Cost 3.4 dB Gain 220 MHz 5/8 λ for 3/8" x 24 thread mounts

- 1.2:1 SWR at resonance • Power rating: 100 watts FM • Tapered stainless steel radiator • Length: 2'7"

Model SF-2

Low Cost 3.4 dB Gain
2 meter 5/8 λ for 3/8" x 24 thread mounts

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless radiator
- Length: 4'

Model RX-440

UHF Magnetic Mount

- 5/8 λ over 1/4 λ design
- 5 dB gain
- Speed rated to 75 mph.
- Includes 12' coax

Collinear

Model CGT-220

5.2 dB Gain 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna

- 1.1:1 SWR (typical) at resonance • 4 MHz. bandwidth under 1.5:1 SWR • Power rating: 200 watts FM • Heigth: 4' 9" including mount
- Spin knob to remove antenna
- 17' of low loss coax with connector

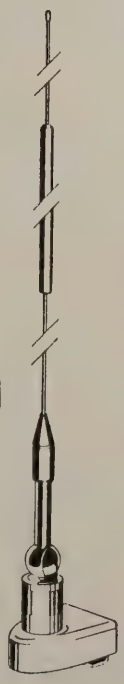
Model CG-220

Has identical electrical characteristics as **CGT-220** but with 3/8 x 24 threaded base for use with standard ball mounts or other 3/8" x 24 Hustler mounts.

Model CGT-144

5.2 dB Gain, 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna

- 6 MHz bandwidth • 1.5:1 SWR • Power rating: 200 watts FM • Length: 7' 1" including mount • 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required



Model CG-144

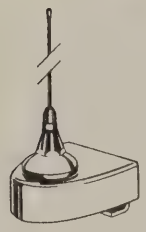
Same as CGT-144 but has 3/8" x 24 threaded base for use with standard ball mounts or other 3/8" x 24 Hustler mounts.

Reliability & Performance...
Beyond your Expectations !

Unity Gain

Model THF

VHF/UHF Trunk-Lip Mount Antenna
Tunable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Easy to install trunk-lip mount attaches to rear or side of trunk lid without drilling. Supplied ready for operation with 17' of coax with connectors installed.



Model UGM

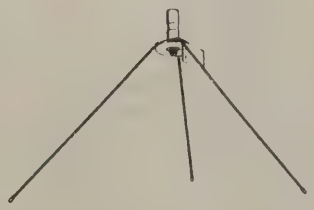
VHF/UHF Magnetic Mount Antenna
Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector.

Model UHT-1

VHF/UHF Roof/Deck Mount Antenna
Low profile mount designed for easy installation in a 3/4" hole on any flat surface or on roof without pulling headliner. Unity gain, 1/4-wave performance. Tunable 17-7 PH stainless steel radiator permits operation on any frequency from 140 to 500 MHz. Trim chart, 15' of coax and connector are included.

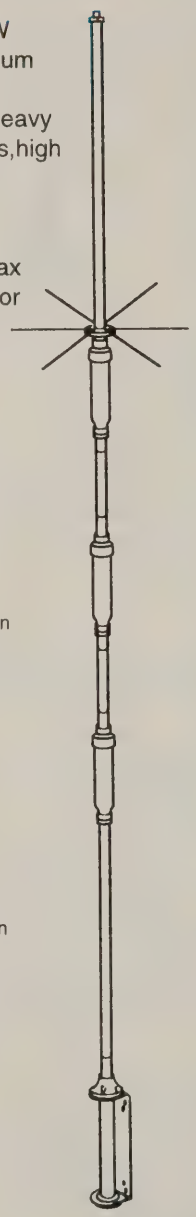
Model MKR-2 Radial Kit

Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8 x 24 threaded base.



Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded - low VSWR at band edges
- Power capability - full legal limit on SSB or CW
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss,high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials



Model 6-BTV

Bands — 10-15-20-30-40 & 75 or 80 meters
Length/weight — 24'/16.5 lbs.
Mounting — Vertical support up to 1-3/4" O.D.
Wind load — 29 lbs. @ 70 mph.
Power capability — Full legal limit SSB/CW
VSWR at resonance — 1.15 to 1 or better
Bandwidth — VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 meters)

Model 5-BTV

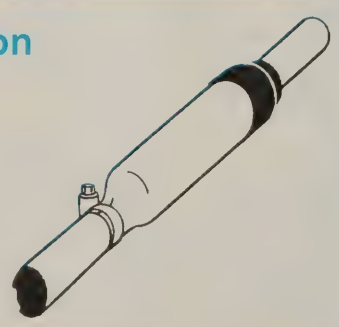
Bands — 10-15-20-40 & 75 or 80 meters
Length/weight — 25'1" /17 lbs.
Mounting — Vertical support up to 1-3/4 O.D.
Wind load — 29 lbs. @ 70 mph.
Power capability — Full legal limit SSB/CW
VSWR at resonance — 1.15 to 1 or better
Bandwidth — VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 Meters)

Model 4-BTV

Bands — 10-15-20-40 meters
Length/weight — 21'5"/15 lbs.
Mounting — Vertical support up to 1-3/4" O.D.
Power capability — Full legal limit SSB/CW
VSWR at resonance — 1.15 to 1 or better
Bandwidth — VSWR 1.6:1 at band edges

30 Meter Add-on Kit for 4-BTV and 5-BTV

Model 30-MTK
Full 30 meter band coverage
Will not affect normal operation
Easy installation
All hardware included
Weight: 5 lbs.



Hustler Resonators

Standard Resonators

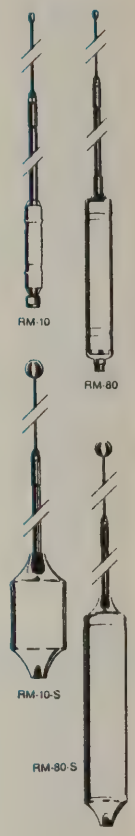
Power rating - 400 watts SSB

Part	Description	Approx. Bandwidth 2:1 SWR or Better
RM-10	10 METER	150-250 KHz.
RM-11	11 METER	150-250 KHz.
RM-12	12 METER	90-120 KHz.
RM-15	15 METER	100-150 KHz.
RM-17	17 METER	150 KHz.
RM-20	20 METER	80-100 KHz.
RM-30	30 METER	50-60 KHz.
RM-40	40 METER	40-50 KHz.
RM-75	75 METER	25-30 KHz.
RM -80	80 METER	25-30 KHz.

Super Resonators

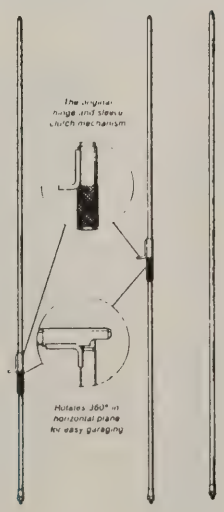
Power rating - full legal limit. Super Resonators also offer wider bandwidth, especially on 40, 75 and 80 meters.

Part	Description	Approx. Bandwidth 2:1 SWR or Better
RM-10-S	10 METER	250-400 KHz.
RM-11-S	11 METER	250-400 KHz.
RM-15-S	15 METER	150-200 KHz.
RM-20-S	20 METER	100-150 KHz.
RM-40-S	40 METER	50-80 KHz.
RM-75-S	75 METER	50-60 KHz.
RM- 80-S	80 METER	50-60 KHz.



Mobile HF Antennas

Hustler Masts



MO-1 Mobile mast, 54" high, for deck or fender mounting-folds over 15" above base.

MO-2 Mobile mast, 54" high, for bumper mounting - folds over 27" above base.

MO-3 Mobile mast, 54" high, solid - does not fold over.

MO-4 HF Mobile Mast
- For use with Hustler HF resonators
- Only 22" long
- Suitable for trunk or deck mounting
- Includes 3 new tip rods

MO-4

Reliability & Performance... Beyond Your Expectations!

Mobile Antenna Hardware

MBM "Super" Magnet

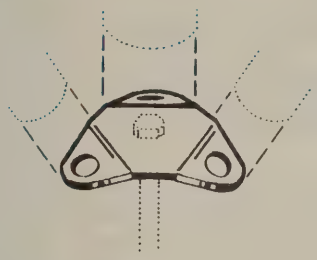
- 95 lb. pull strength
- Powerful 5 inch dia. magnet
- 16 feet RG 58 coax with PL-259 connector
- 3/8" x 24 female threads
- Recommended for antennas up to 48" in length

NEW

Multi-band Adapter

VP-1

Automatic bandswitching using any three Hustler H.F. mobile resonators. Adapts with any Hustler H.F. mast (MO-1, MO-2, MO-3, MO-4) for tri-band operation easily and quickly.



Resonator Spring

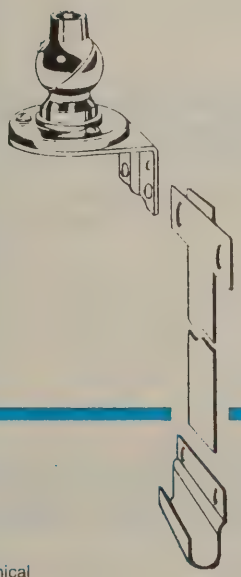
RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3 x 1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, male on the other.

Bumper Mount

BM-1

Design is rugged for supporting Hustler antenna with Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.
Mount includes 180° adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion.



Quick Disconnect

QD-2 100% Stainless Steel

Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly asssures freedom against ice and dirt jam up. Accommodates small, medium and large size mobile antennas. Equipped with 3/8" x 24 threads, female one end and male on the other.

Stainless Steel Mounts

- Exceptional performance and quality
- 180° adjustable reinforced stainless ball
- Professional quality Cycolac bases for greatest mechanical stability
- Exclusive "C" backup plate allows external installation
- Supplied with all mounting hardware and cork pad
- Applicable with all Hustler and other 3/8" x 24 thread antennas

SSM-1 Professional Ball Mount and Spring
SSM-2 Ball Mount
SSM-3 Stainless Steel Spring with Coupling Stud

Reliability & Performance... Beyond your Expectations !

Professional Series Heavy Chrome

Model C-32

Hustler professional ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware, and hex wrench.

Model C-29

Stainless steel, corrosion resistant and electropolished spring complete with 3/8" x 24 coupling stud.

Model C-30

Chrome-plated steel spring complete with 3/8" x 24 coupling stud.

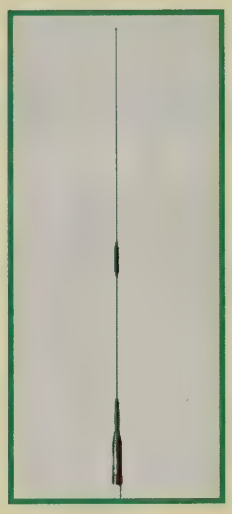
Maldol

THE INNOVATIVE ANTENNA COMPANY

PERFORMANCE PLUS!

THE ARD & EX SERIES OF DUAL BAND MOBILE ANTENNAS

Meet the hottest new line of dual band mobile antennas on the road today. Maldol's ARD & EX series. They are world famous for style and performance and extend the range of any mobile rig, new or old. ARDs and EXs are pretuned, broadbanded, weatherproof and available in black or chrome finish and truly make the going first class!



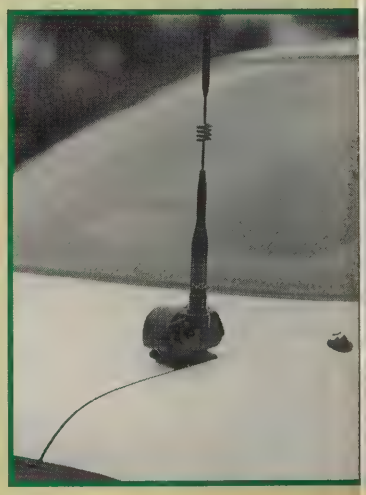
MODEL	LENGTH	GAIN (DBD)	POWER	
DUAL BAND (144/430MHz)				
ARD5B	19.3"	— / 3.8	120W	BLACK ONLY
ARD6/6B	26.5"	2.6 / 4.9	120W	
ARD 10/10B	34.4"	3.0 / 5.5	120W	
ARD 12/12B	48.2"	4.3 / 6.8	150w	
ARD 16/16B	64.8"	5.0 / 7.7	150w	
EX110/110B	37.3"	3.0 / 5.5	50W	
EX111/111B	43.8"	3.5 / 6.0	50W	
FA50	19.0"	2.1 / 3.2	50W	MINI MAG MOUNT - 10' CABLE
MONOBAND				
ARS50 (50MHz)	60.4"	1/4 WAVE	100W	6 METERS - CHROME ONLY
ARS 144/144B (144MHz)	55.3"	4.1150	150W	2 METERS
ARS 430/430B (430MHz)	37.9"	5.5150	150W	70 CM

See MALDOL in the Price List

THE WORLD CLASS IN HT ANTENNAS

Acknowledged as the world standard for quality and performance, The Maldol line of HT Antennas continues to outperform the competition in all categories from its "soft" rubber duck dual band to the gain antennas that improve any HT.

AH209S (144/430MHz)	SOFT DUCK	DUAL BAND
HS702S (144/430MHz)	17.6"	- / 3.2 dB Gain
FR30/30H (144/430MHz)	6 -0 15" TELESCOPE	- / 2.1 DB Gain

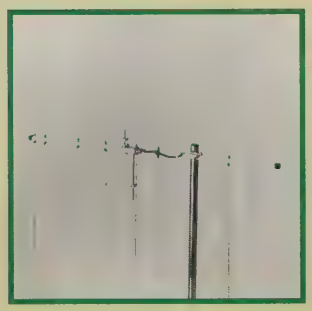


NOTHING ELSE LIKE IT!

MK-30 MOTORIZED TILT-OVER MOBILE MOUNT

The mobileer's dream! Ideal mate for ARDs and EXs but also works great for other antennas up to 65" long. Neat motorized unit quick-installs on trunk lid, roof gutter or roof rack. Remote up/down switch fits under dash. Permits one touch tilting for low overhangs and garages. T/ Trunk, H/ Hatchback, R/ Roof Gutter or K/ Roof Rack.

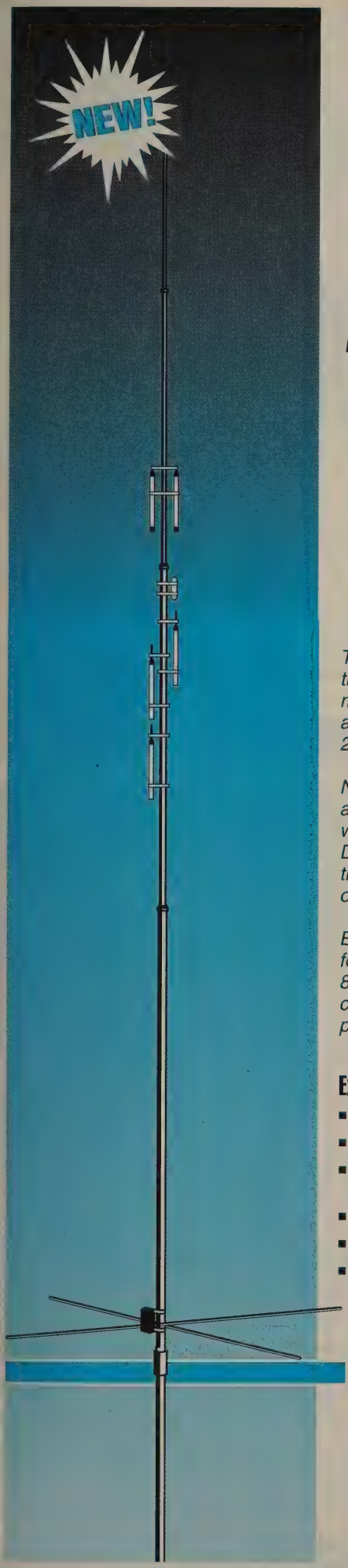
MK30 POWER MOUNT - Handles antennas up to 65" long and 1lb
RG4M - Matching Cable & Connector set for all mobile antennas



FOX 727 DUAL BAND PORTABLE/BASE YAGI

Recognized as the standard in lightweight, high quality VHF/UHF Beams, Maldol is pleased to offer the only portable dual band yagi covering VHF & UHF. The construction is all stainless hardware with lightweight aluminum boom. The unit comes in its own carrying pouch for easy transport. Covers both 144 and 430MHz bands and handlew 100 watts, this unit will handle all your needs at home or in the field.

HSFOX727 (144/430MHZ) Dual Band Portable Yagi – Gain: 9.5/11.5 dBi



Put The World At Your Fingertips!

New Telex Hy-Gain DX77 Advanced Vertical Windom Antenna

...No Ground Radials!

Handles 1500 Watts PEP... 10 thru 40 Meters Including All WARC Bands

The most advanced vertical antenna — the Hy-Gain DX77 is unsurpassed in mechanical design, high power capabilities and provides 55% greater band width on 20 and 40 meters than competitive verticals.

Never before has such a high performance antenna provided no-compromise capabilities without the need for ground radials. The DX77 is the only vertical without radials that can handle 750 watts keydown of RF output for 30 minutes.

Easy tilt mount is convenient to lower for tuning. Recommended installation is 8 feet above ground. Mount on pole, chimney, rooftop, or deck — or great for portable and RV operation!

Exceptional value with advanced features:

- ***Automatic band switching***
- ***Low angle of radiation***
- ***Double wall tubing, steel masts clamp and stainless steel hardware***
- ***29 ft. compact, low profile design***
- ***2-year warranty***
- ***In Stock at AES®***

Call 1-800-558-0411

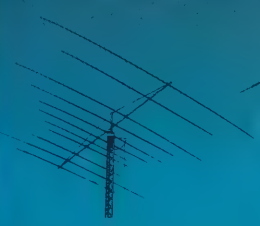
hy-gain® by Telex

Your Performance Advantage

Telex Communications®, Inc.
8601 East Cornhusker Highway
Lincoln, NE 68505 USA
Phone: 402-467-5321 ▪ FAX:402-467-3279

Hy-gain by Telex Your Performance Advantage

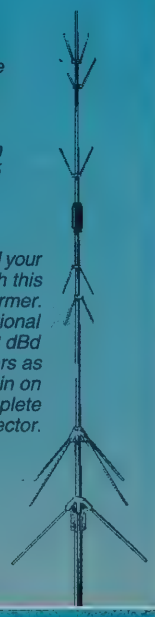
What's important to you when you're planning your new antenna system? Is it durability? Performance? Best antenna for the money? Whatever your criteria, Hy-Gain antenna products have always delivered performance, reliability and value–from 160 meters to satellite communications. Start with our quality designs and high quality materials, add our professional antenna range testing, MIL spec manufacturing and quality assurance, and you can understand why Hy-Gain is the most respected name in amateur antenna products.



TH11DX *This unique design gives you the frequency coverage of a log periodic with the performance of a monobander. Covers 20, 17, 15, 12 and 10 meters with maximum performance and only one feedline.*

TH3 MK4 *Why make compromises when you can have the best? The TH3 MK4 tribander gives you Hy-Gain performance and reliability with a modest price that is less than the Cushcraft A3. Features impressive 5.9 dBd gain and all stainless steel hardware.*

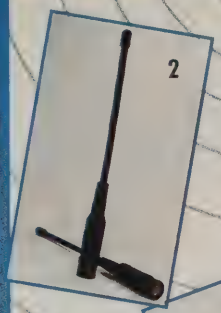
V2R — *A rugged antenna for 2 meters, the V2R provides 3 dBd gain with a wide coverage pattern. It features two collinear 5/8 wave antennas fed in phase along with 2 sets of radials that decouple the lower radiator from the mast. Tunable from 138-175 mHz with wind survivability to 120 MPH.*

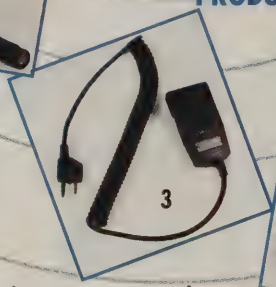


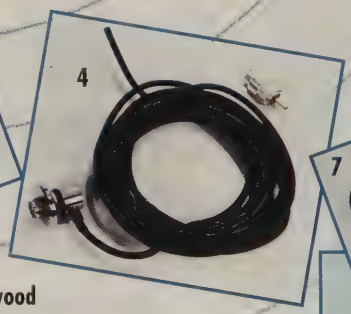
V42R – *Expand your capabilities with this dual-band performer. This omnidirectional antenna gives you 3 dBd gain on 2 meters as well as 5 dBd gain on 70 cm. Comes complete with type N connector.*

Hy-Gain Ham IV with New Digital Control System

More Hy-Gain Rotators - See Page 142







GENESYS
PRODUCTS GROUP, LTD.

1. *Enhanced* EARTALK® combines an invisible-mic and earphone into a compact earpiece
   Model CT-221E/CT-221ME (split plug): Yaesu, Icom, Alinco, Motorola; CT-221KE Kenwood
2. Replacement dual-band duckies, B-27, B-35
3. Speaker/Mic – Model QS-110, QS-110K Kenwood
   •Superior receive and transmit audio •Spring loaded clip with 360° swivel •External earphone jack
4. PO Mount – SO-239 Mount with 16 feet of RG-58 coax cable and PL-259 connecter
5. Duplexer SY-25D VHF/UHF
6. NMO Mount – Motorola type mount with 16 feet of RG-58 coax cable and PL-259 connecter
7. ADP-1 chrome adapter NMO to SO-239
8. THROAT MIC® – ideal microphone for action sports, police, fire and military: Model T-05, T-05K Kenwood, T-05M Motorola
   •Operates in high noise environments •Compatible with amateur and commercial hand-held radios

FOR GENESYS PRICES - SEE P.P. 8-9

OUTbacker

• ONE ANTENNA DOES IT ALL • BUILT TO LAST • WIDE BAND-WIDTH • LOW SWR • SHEER MOBILING ENJOYMENT

It's plug-n-play, mate!

OUTBACKER

links your rig to the world.

The Complete HF Mobile Antenna System

Whether in the city...

in the country...

or backpack portable.

- **Outbacker Classics** OB8: 6 ft. tall. 80-10m plus WARCs. 300 watts PEP. 3/8-24 thread. Ideal for all applications. OBS8: Same specs. Splits in two sections. Easy to store. OB8TRI: Same specs. Splits in three sections. Backpacker's delight. OB8HP: 500 watt PEP version. OBM: Ham/Marine combo. Popular Ham bands PLUS marine ITU bands.
- **Outbacker Perth** 7.5 ft. tall. 80-10m plus WARCs. 150 watts PEP. 3/8-24 thread. 3.5 ft. stinger retracts into 4 ft. mast for garaging or trunk storage. Superb performance. Perfect for trunk mounting. Low wind resistance.
- **Outbacker Perth Plus** 75-10m with 6m and 2m. Works well with the-new ICOM IC-706 and ALINCO DJ-70 transceivers.
- **Outbacker Jr.** OBJR8: 4 ft. tall. 80-10m plus WARCs. 150 watts PEP. 3/8-24 thread. Terrific for hatchback or roof mounting and RV's.

OUTBACKER MODEL DESCRIPTIONS AND PRICING

Standard models with 8 bands — 75m-40m-30m-20m-17m-15m-12m-10m — All with standard 3/8-24 threads, all models black.

	Description	Model #	Price
OUTBACKER PERTH	*Popular* OUTBACKER • highest performer • 4 ft. shaft with 3 ft. stinger low wind resistance • 150 watt P.E.P.	Model Perth	$274.00 P
OUTBACKER PERTH Plus	*Newest* OUTBACKER • 75-10m with 6m and 2m	Model Perth Plus	$289.00
OUTBACKER 8	6 ft, 300 watts P.E.P.	Model #OB-8	$259.00
OUTBACKER HP	6 ft, 500 watts P.E.P.	Model #OB-8HP	$289.00
OUTBACKER SPLIT	6 ft, 300 watts P.E.P., breaks down into 2-3 ft. sections for easy storage storage pouch included	Model #OB-S8	$289.00
OUTBACKER TRI-SPLIT	same as OUTBACKER SPLIT except breaks down into 3-2 ft. sections, storage pouch included	Model #OB-8TRI	$319.00
OUTBACKER MARINER	includes ham bands 75m-40m 20m-17m-10m and Marine ITU bands; 2.182MHz - 4.1MHz - 6.2 MHz - 8.2 MHz -12.4MHz - 16.5 MHz - 22.1MHz	Model #OB-M	$389.00
OUTBACKER JR	4 ft, 150 watts P.E.P.	Model OB-JR8	$229.00
OUTBACKER Spring/Base	3/8-24 threads zinc-plated spring, nickel-plated steel base, machined brass and SO-239 RF termination,1/2" hole	Model OB-SB	$82.00

KLM TRIBANDERS

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with *KLM's* unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.

KT-34A

SPECIFICATIONS

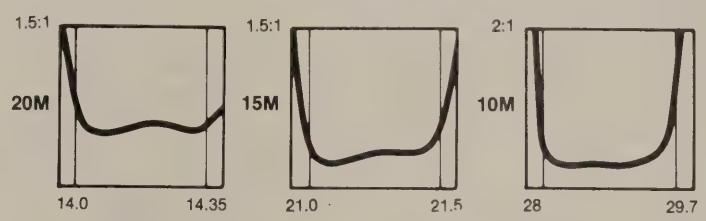
ELECTRICAL

BANDWIDTH	14.0-14.350 MHz
	21.0-21.450 MHz
	28-29.7 MHz
GAIN	7 dBd ± 0.3 dB
VSWR	1.5:1
F/B-F/S	20 dB/30 dB
FEED IMP	50 Ohms w/Balun
BALUN	4:1, 5 kW PEP

MECHANICAL

ELEMENT LENGTH	24 ft.
BOOM LENGTH	16 ft.
TURN RADIUS	16 ft.
WINDLOAD	6 sq. ft.
WEIGHT	45 lbs.
MAST	2 in. O.D.

KT34A vs. SWR



KT-34XA

SPECIFICATIONS

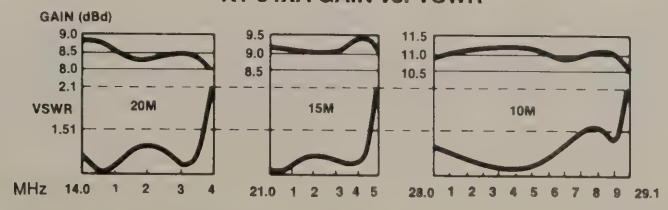
ELECTRICAL

BANDWIDTH	14.0-14.350 MHz
	21.0-21.450 MHz
	28-29.1 MHz
GAIN	8.5-9 dB
	9-9.5 dB
	11-11.3 dB
VSWR	1.5:1
F/B-F/S	20 dB/40 dB
FEED IMP	50 Ohms w/Balun
BALUN	4:1, 5 kW PEP

MECHANICAL

ELEMENT LENGTH	24 ft.
BOOM LENGTH	32 ft.
TURN RADIUS	21.5 ft.
WINDLOAD	9 sq. ft.
WEIGHT	68 lbs.
MAST	2 in. O.D.

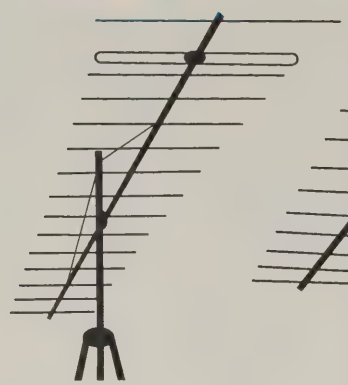
KT-34XA GAIN vs. VSWR



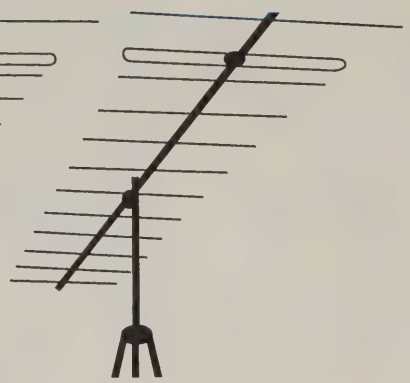
KLM VHF-UHF ANTENNAS

2 METER YAGIS

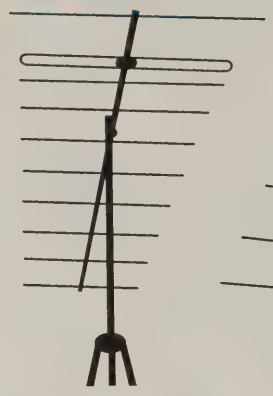
2M-15X



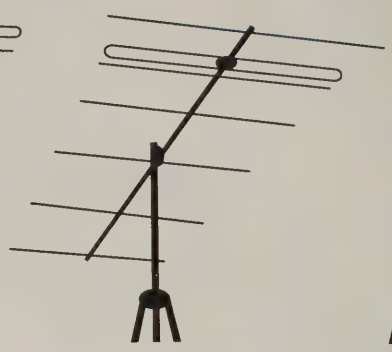
2M-12X



2M-10X



2M-7X



2M-4X

2 METERS

	2M-20 LBX	2M-15X *new for '96*	2M-12X *new for '96*	2M-10 X *new for '96*	2M-7X *new for '96*	2M-4 X
ELECTRICAL:						
BANDWIDTH	SPEC. 144-146 USABLE 143-148 144-15.5 dBd	144-148 MHz	144-148 MHz	144-148 MHz	144-148 MHz	144-148 MHz
GAIN	145-15.5 dBd 146-15.4 dBd 147-15.3 dBd 148-13.7 dB	14.8 dBd	13.4 dBd	12.5 dBd	10.3 dBd	8.5 dBd
VSWR.....Less than	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B.....Greater than	30 dB	30 dB	25 dB	25 dB	25 dB	20 dB
BEAMWIDTH	E=26°, H=28°	E=26°, H=29°	E=28°, H=33°	E=32°, H=36°	E=46°, H=50°	62°
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1 2 kW Coax	4:1, 2 kW Coax
MECHANICAL:						
ELEMENT LENGTH	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.
BOOM LENGTH	38.5 ft.	28 ft.	21 ft.	15 ft.	8 ft. 9 in.	4.2 ft.
TURN RADIUS	21 ft. 10 in.	15 ft. 5 in.	13 ft.	8 ft. 9 in.	5 ft.	4 ft.
WINDLOAD	2.19 sq. ft.	1.75 sq. ft.	1.6 sq. ft.	1.38 sq. ft.	.65 sq. ft.	.25 sq. ft.
WEIGHT	17 lbs.	11 lbs.	9 lbs.	6 lbs.	4 lbs.	2 lbs.
MAST	2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. max.

440-16X

440-10X

440-6X

1.2-15LBX

1.2-24LBX

440 MHz — 432 MHz — 1296 MHz

	440-16X	440-10X	440-6X	432-30 LBX	432-20 LBX	1.2-44 LBX	1.2-24 LBX	1.2-15 LBX
ELECTRICAL:								
BANDWIDTH	420-450 MHz	420-470 MHz	420-470 MHz	430-440 MHz	425-440 MHz	1260-1300 MHz	1260-1300 MHz	1260-1300 MHz
GAIN	14.0 dBd	11.5 dBd	8.9 dBd	17.3 dBd	15.3 dBd	18.2 dBd	16.2 dBd	13.6 dBd
VSWR.....Less than	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B.....Greater than	20 dB	20 dB	20 dB	20 dB	20 dB	39 dB	39 dB	39 dB
FEED IMPEDANCE	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	Coax "N" 4:1 2 kW	1:1 Sleeve, 2 kW	1:1 Sleeve, 2 kW	4:1 Rigid Coax	4:1 Rigid Coax	4:1 Rigid Coax
BEAMWIDTH	E=28°, H=32°	48°	60°			E=16°, H=18°	E=22°, H=24°	E=28°, H=30°
MECHANICAL:								
ELEMENT LENGTH	14 in. max.	14 in. max.	14 in. max.	14 in. max.	14 in. max.	4.5 in.	4.5 in.	4.5 in.
BOOM LENGTH	10 ft. 3 in.	4.75 ft.	28 in.	21 ft. 11 in. (9.6 wavelength)	12 ft. 4 in. (5.42 wavelength)	12 ft. 4 in.	75 3/4 in.	42 in.
TURN RADIUS	6 ft.	4.90 ft.	2 ft. 5 in.	12 ft. 4 in.	7 ft.	84 in.	38 in.	43 in.
WINDLOAD	0.74 sq. ft.	0.53 sq. ft.	0.2 sq. ft.	1.72 sq. ft.	0.9 sq. ft.	1 sq. ft.	1/2 sq. ft.	1/4 sq. ft.
WEIGHT	7.5 lbs.	4 lbs.	1.2 lbs.	9 lbs.	5 lbs.	10 lbs.	7 lbs.	4 lbs.
MAST	1 1/2 in.	1 1/2 in.	1/12 in.	2 1/8 in. max.	1 1/2 in.	2 in. O.D.	up to 2 in. O.D.	up to 2 in O.D.
MOUNT	Center	Rear	Rear	Center	Center	Center	Center	Rear

KLM SATELLITE CIRCULARS - VHF/UHF

ELECTRICAL:	2M-14C	2M-22C	435-18C	435-40CX
BANDWIDTH	144-150 MHz	144-150 MHz	420-450 MHz	420-450 MHz
GAIN	11 dBc	13 dBc	12 dBc	15.2 dBc
VSWR Less than	1.5:1	1.5:1	1.5:1	1.5:1
F/B Greater than	20 dB	20 dB	20 dB	20 dB
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BEAMWIDTH	38°	34°	34°	25°
ELLIPTICITY	3 dB max	3 dB max	3 dB max	3 dB max
BALUN	(2) 4:1 coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*

MECHANICAL:				
ELEMENT LENGTH	40.625 in. max	40.625 in. max	13.25 in. max	13.625 in. max
BOOM LENGTH	12 ft. 9 in.	19 ft. 1 in.	7 ft. 4 in.	14 ft. 7 in.
TURN RADIUS	7 ft.	11 ft.	7 ft.	8 ft., 9 in.
WINDLOAD	1.25 sq. ft.	1.85 sq. ft.	0.5 sq. ft.	1.16 sq. ft.
WEIGHT	7.5 lbs.	11 lbs.	4.5 lbs.	10 lbs.
MAST	2 in.	2 in.	1.5 in.	1.5 in.
MOUNT	Center	Center	Rear	Center
POLARITY	Circular R.H. and L.H. switchable using CS-3	Circular R.H. and L.H. switchable using CS-2		

*Derate to 250W when using Switchers (supplied)

2M-22C

435-40CX

HF LOG PERIODICS

KLM's Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA.** All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

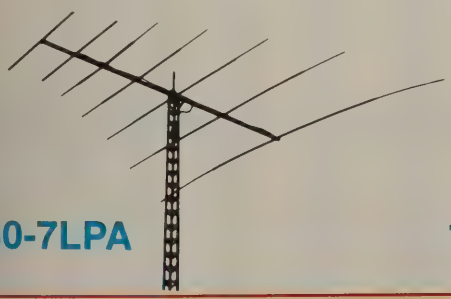
ELECTRICAL:	10-30-7LPA	7.2/10-30LPA	6-30-15LPA
BANDWIDTH	10-30 MHz	7.2/10-30 MHz	6-30 MHz
GAIN	7 dBd typ	3/7 dBd typ	5.5 to 8 dBd
VSWR	1.5:1 typ	1.5:1 typ	2:1 and less, typ
F/B	15 dB	10/15 dB	15 dB typ
FEED IMP	50 Ohms, unbal.	50 Ohms, unbal.	50 Ohms, unbal.
BALUN(S)	4:1, 5 kW	4:1, 5 kW	(3) 4:1, 4 kW PEP

MECHANICAL:			
ELEMENTS	7	8	1.5
ELEMENT LENGTH	43 ft.	46 ft.	48 ft.
BOOM LENGTH	30 ft.	42 ft.	46 ft. (6-12-8)
TURN RADIUS	26 ft.	32 ft.	30 ft. (10-30-7)
WINDLOAD	8.25 sq. ft.	12 sq. ft.	24 sq. ft.
WEIGHT	70 lbs.	100 lbs.	150 lbs. (6-12-80) / 70 lbs. (10-30-7)
MAST	2 in.	2 in.	2 in./3 in.

SK-8 Conversion Kit

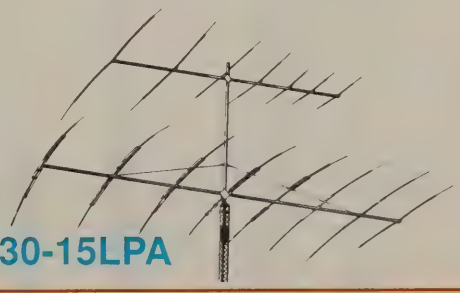
This kit enables you to add 40 Meters to your *KLM* 10-30-7LPA antenna. The SK8 kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a *KLM* 40M Dipole to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Front-to-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.



10-30-7LPA

7.2/10-30LPA



6-30-15LPA

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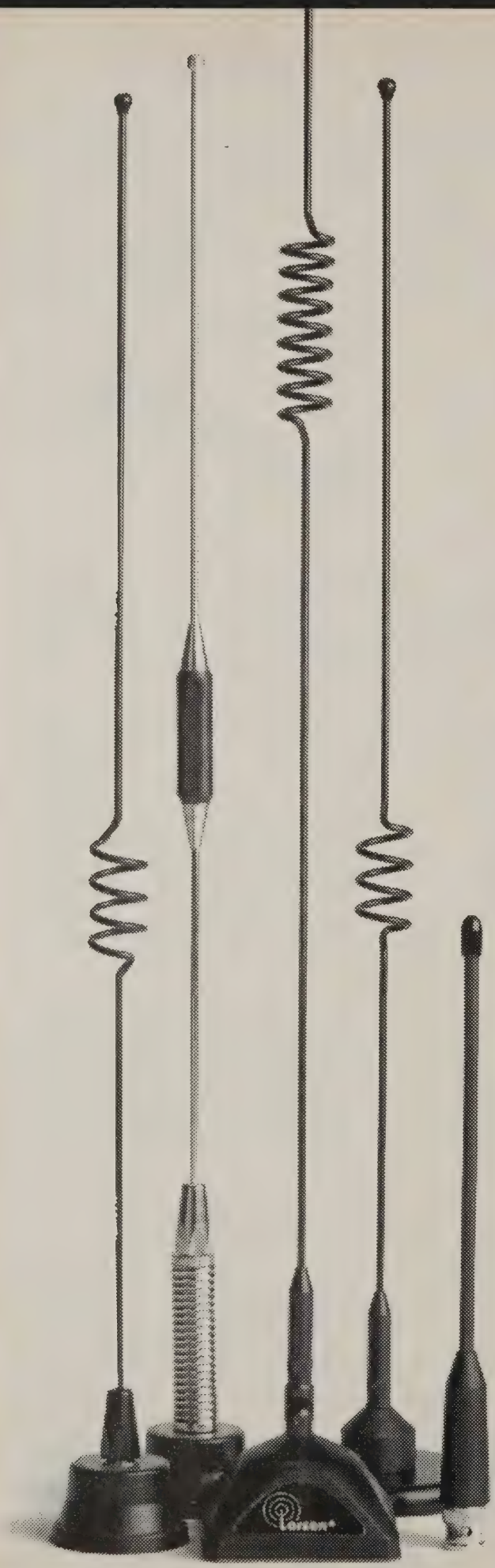


Quality Performance You Can Hear

Simultaneous VHF and UHF Communication Over Wide Bandwidths

Larsen's Dual Band Series

Larsen dual band antennas provide excellent performance for simultaneous use of VHF and UHF amateur frequencies. Each Larsen dual band antenna is factory preset to guarantee optimum performance with no tuning required.

	NMO 2/70 SH	MM 2/70	NMOQ 2/70 B
Freq.	144-148/440-450 MHz	144-148/440-450 MHz	144-148/440-450 MHz
Gain	Unity	Unity	Unity
Power	100 Watts	100 Watts	100 Watts
Type	VHF: Center Loaded 1/4 λ UHF: Center Loaded 3/4 λ	VHF: Center Loaded 1/4 λ UHF: Center Loaded 3/4 λ	VHF: Center Loaded 1/4 λ UHF: Center Loaded 3/4 λ
Base	NMO UHF BASE B w/spr	3" Round mag. mount	NMO UHF BASE B
Height	17"	17"	18"
Whip	W NMO 2/70 SH	W NMOQ 2/70 B	W NMOQ 2/70 B

λ = wave length

	KD4 2/70	NMO 2/70 C	NMO 2/70 B	KG 2/70 UD PL
Freq.	144-148/442-448 MHz	144-148/440-450 MHz	144-148/440-450 MHz	144-148/442-448 MHz
Gain	Unity	2.4/4 dBd	2.4/4 dBd	2.4/4.5 dBd*
Power	25 Watts	100 Watts	100 Watts	50 Watts
Type	VHF: Loaded 1/4 λ UHF: 1/4 λ	VHF: 5/8 Wave UHF: Collinear	VHF: 5/8 Wave UHF: Collinear	VHF: 1/2 λ UHF: Collinear
Base	BNC	NMO 2/70 BCO	NMO 2/70 BCO	KG 2/70 O/S
Height	8"	36.75"	33.5"	32.5"
Whip	N/A	W 2/70	W 2/70 B	W KG 2/70

λ = wave length *Ground plane required for gain.

Larsen®

Low Impedance Design Creates A Premium On-Glass Antenna

Larsen's Kūlglass™ Series

Larsen's Kūlglass (KG) series uses a patented low impedance design and advanced materials to produce the world's best on-glass antenna. Our KG series uses advanced resin polymer plastic to completely enclose the circuit board or loading coil for mechanical durability and weather resistance. 3M's best adhesive tape, plus Larsen's unique bonding enhancer, ensure the best possible grip to the glass.

	KG 144 UD PL	KG 220 UD PL	KG 440 UD PL
Freq.	144-160 MHz	220-225 MHz	440-469 MHz
Gain	2.4 dBd	2.4 dBd	2.4 dBd
Power	100 Watts	100 Watts	100 Watts
Connector	PL 259 (Loose)	PL 259 (Loose)	PL 259 (Loose)
Type	1/2 λ	1/2 λ	1/2 λ
Base	KG 144 O/S	KG 220 O/S	KG 440 O/S
Height	48"	26.5"	15"
Whip	W KG 144	W KG 220	W KG 440

λ = wave length

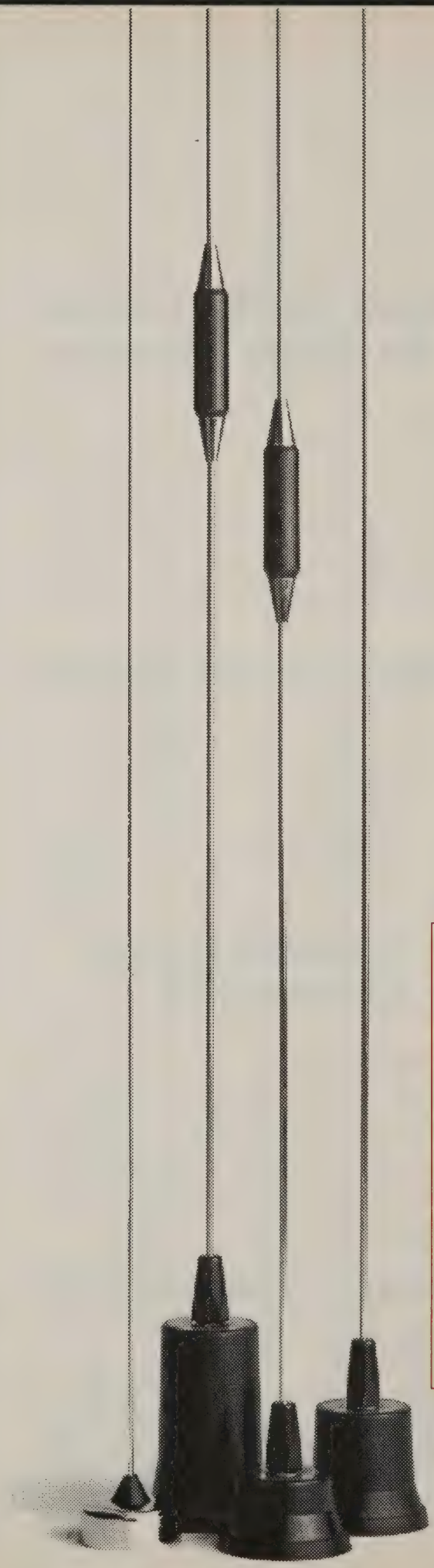
Outstanding Transmit Range and Durable Construction

Larsen's Kūlduckie™ Portable Series

Superior transmit range and tough mechanical durability are the hallmark of Larsen portables. All of our center cores are made of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Our double spring BNCs also reduce wear on your radio mount. Other mounting styles available.

	KD4 146	KD4 146 HQ (2m)	KD14 2M HW
Freq.	144-148 MHz	144-148 MHz	144-148 MHz
Gain	Unity	Unity	Unity
Power	25 Watts	25 Watts	25 Watts
Type	1/4 λ, Helical	1/4 λ, Helical	1/2 λ, Telescoping
Base	BNC	BNC	BNC
Height	8"	10.5"	8.5" to 42"
Whip	N/A	N/A	W KD14 2M HW

λ = wave length



Proven Superior Performance and Rugged Dependability

NMO Mobile Antennas

Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials, and construction to provide a premium mount. For demanding outdoor applications, the chemical resistant NMO series is housed in a resin polymer plastic shell which is completely molded around the nickel plated brass whip stud to eliminate moisture damage. Our superseal gasket also greatly reduces water intrusion under the base.

	NMO 27 C	NMO 150 C	NMOQ SPEC	NMO 220 C	NMO 440 C
Freq.	27-31 MHz	144-174 MHz	136-512 MHz	220-225 MHz	440-460 MHz
Gain	Unity	3 dBd	Unity	Unity	4.5 dBd
Power	200 Watts	200 Watts	200 Watts	200 Watts	200 Watts
Type	Loaded 1/4 λ	5/8 λ	1/4 λ	5/8 λ	5/8 over 1/2 λ
Base	NMO 27 BCO	NMO 150 BCO	N/A	NMO 220 BCO	NMO UHF BASE B
Height	53"	51.75"	21"	34.5"	33"
Whip	W 490	W 490	N/A	W 400	W 154

λ = wave length

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77BNC
12" Dual Band "Rubber Duck" covers 2 meter and UHF.

144BNC
12" 1/4 Wave "Rubber Duck" for 144-148 MHz.

220BNC
10" 1/4 Wave "Rubber Duck" for 220-225 MHz.

450BNC
6½" 1/4 Wave "Rubber Duck" for 430-470 MHz.

MO144-440
Dual Band Antenna covers both 2 meter and UHF.

MM270B
Dual Band MICRO-MAG™ Miniature Antenna to cover 2 meter and UHF.

40M or 75M

15M

20M

10M

AB5
Complete 5 Band Antenna. Kit includes resonators for 10M, 15M, 20M, 40M, and 75M.

VAA002
1/4 Wave Magnet Mount Kit for 2 meters; can be cut for 220 or 450 MHz. Includes 12' of cable with PL-259 connector. Also Available: **VAA002BN** Same as VAA002 except with BNC connector.

PM144-440BN
Dual Band Magnet Mount Antenna Kit covers both 2 meter and UHF. Includes 12' of cable with BNC connector.

GM270
Dual Band Through-The-Glass Antenna to cover both 2 meter and UHF.

PHF Series Monoband Antennas...
Consist of of a 4' fiberglass lower section with an adjustable steel whip on top. Available Models: PHF160, PHF75, PHF40, PHF30, PHF20, PHF17, PHF15, PHF12, PHF10, & PHF6.

DB240
Dual Band Base Station Antenna to cover 2 meter and UHF.

CX144B
VHF Mobile Communications Extender. 3dB Gain, 5/8 Wave. 144-148 MHz. Black.

PAM
3-3/4" Chrome Magnet Mount Kit. (Black: **PAMB**)

PAS
Surface Mount Kit for 3/4" hole.

PAT2
Trunk Lip Mount Kit. (Black: **PAT2B**)

PAT3
Swivel Trunk Mount Kit. Adjustable.

WMSLBNC
Window Mount with BNC.

SS100MOT
Stainless Steel 3-Way Mirror Mount with Motorola style mounting.

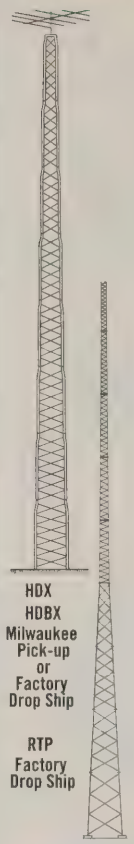
MM3401
Maxi-Magnet Mount Kit includes 3, 5" magnets and 17' of cable with PL-259 connector.

BNCSC
BNC Suction Cup Mount.

DAK
Dipole Mount.

D270
Duplexer for 2 Band Antennas.

Towers & Rotors ...



HDX
HDBX
Milwaukee Pick-up or Factory Drop Ship

RTP
Factory Drop Ship

ROHN Heavy Duty HDX-Series Towers for HAM RADIO

All steel with X-brace construction for strength that allows a free-standing configuration without guy wires at 70 mph windspeed.with antennas up to 10 sq. ft. wind area and boom lengths not exceeding 10 ft. The galvanized steel provides an attractive and maintenance-free finish. The entire tower can be assembled on the ground and hinged up in to position with the optional hinged base, or built vertically, section by section. Supplied with BXB base stubs for concrete mounting, rotator plate, mast clamp and hardware. All makes of rotators can be installed on the rotator plate inside of the top section. Tubing furnished that can be held in place with the mast clamp on the top plate to act as a thrust sleeve for a 1-1/4 in. mast.

Model	Height.	Sections	Windload @ 70 mph	Weight	PRICE
HBX-40/BXB-6	40 ft.	5	10 sq. ft.	276 lbs	$399.95
HBX-48/BXB-7	48 ft.	6	10 sq. ft.	353 lbs	499.95
HBX-56/BXB-8	56 ft.	7	10 sq. ft.	444 lbs	629.95

ROHN Heavier Capacity HDBX-Series

Same structural features of the HDX, but capable of up to 18 sq. ft. of antenna capacity at 70 mph wind speed.

Model	Height.	Sections	Windload @ 70 mph	Weight	PRICE
HDBX-40/BXB-7	40 ft.	5	18 sq. ft.	330 lbs	$469.95
HDBX-48/BXB-8	48 ft.	6	18 sq. ft.	422 lbs	619.95

New! - ROHN RTP-Series

A new line of Rohn self-supporting amateur towers designed to the latest EIA revisions. All models are hot dip galvanized after fabrication with a minimum of 2 oz. of zinc per square ft of surface. They are shipped complete with the necessary sections, rotator plate, top plate, short base or foundation hardware, grounding materials and anti-climb warning sign. Some sections are also supplied with step bolts for climbing. The rotator plate is pre-drilled to accept the most popular rotators. The top plate is predrilled to accept a TB-3 thrust bearing for a 2 inch mast or a TB-4 for a 3 inch mast. The thrust bearing is optional and must be ordered separately. These towers are designed for 70, 80 or 90 mph basic wind speeds and to accommodate most amateur antenna loads to heights of 190 feet. Shown here is a selection of popular ham models.

Model	Height.	Sections	Windload @ 70 mph	Weight	PRICE
SSO40D70RPT	40 ft.	2	16.7 sq. ft.	501 lbs	$1199.00
SSO50D70RTP	50 ft.	3	15 sq. ft.	564 lbs	1439.00
SSO60D70RTP	60 ft.	3	15 sq. ft.	1013 lbs	2099.00
SSO70D70RTP	70 ft.	4	13.3 sq. ft.	1076 lbs	2269.00
SSO80D70RTP	80 ft.	4	13.3 sq. ft.	1539 lbs	3119.00
SSO90D70RTP	90 ft.	5	11.7 sq. ft.	1656 lbs	3369.00

Glen Martin Engineering

Featuring a selection of complete Aluminum Tower Packages, Roof-Top Tripods and the Hazer Antenna Tram System.Factory Drop Ship. Price includes 48-State Shipping.

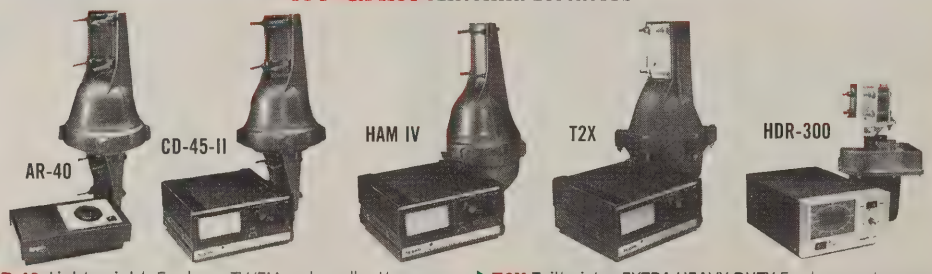
See Price List and p.143 for more information

U.S. TOWER

Self-supporting steel crank-up towers for various heights and strengths. (3) compact models--TMM-series • (6) standard models –TX-series • 5 heavy-duty models – HDX-series, • 7 tubular crank-up model – MA-series.• a full complement of accessories. Factory Drop Ship

See Price List and p.145 for more information

HY-GAIN Antenna Rotators



▶**AR-40** Lightweight For large TV/FM and smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor: 17⅜"h x 8" dia., 12 ball bearings, disc brake. Accepts mast sizes up to 2⅛" diameter. Automatic, silent control box – dial and touch for desired direction. Use Belden 8448 8-wire control cable. 14 lbs. ... HYG 305 **$199.95**

▶**CD-45-II** Medium Duty For antennas up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor unit: 17⅜"h x 8" dia., 48 ball bearings, disc brake. Accepts mast sizes up to 2⅛" diameter. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face reversable for N or S center scale, as desired. Use Belden 8448 8-wire control cable. 20 lbs. ..... HYG 302 **$279.95**

▶**HAM IV** Heavy Duty For medium-sized antennas with a up to 15 sq. ft. windload area when mounted in-tower, or 7.5 sq. ft. when mast mounted with optional lower support bracket. Rotor unit: 13½"h x 8" dia., 98 ball bearings, electric locking steel wedge brake. Accepts mast sizes up to 2⅛" diameter. Illuminated indicator, separate snap action brake and rotation switches, North or South center scale. Use Belden 8448 8-wire control cable. 24 lbs. ... HYG 304 **$379.95**

▶**T2X** Tailtwister EXTRA HEAVY DUTY For large antennas up to 20 sq. ft. windload when mounted in-tower, or 10 sq. ft. mast mounted with optional lower support bracket. Rugged casting –14¹⁄₁₆"h x 9⁵⁄₁₆" dia., 138 ball bearings, electric locking steel brake. Accepts mast sizes up to 2⅛" diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, North or South center scale. Use Belden 8448 8-wire control cable. 28 lbs. ....HYG 303 **$449.95**

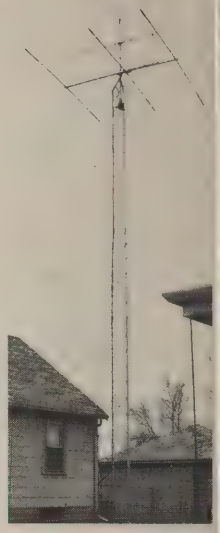
▶**HDR-300/A** Deluxe Extra Heavy-Duty In tower mount – for large antenna arrays up to 25 sq. ft. windload. Rotor: 7"x 9" x 10"h, 138 ball bearings, solenoid operated locking brake. Accepts masts up to 3" in dia. Digital directional indicator accurate to 1°. Separate brake and rotation controls. Use Belden 8448 8-wire control cable. 55 lbs. .... HYG 300 **$949.95**

HY-GAIN Steel Crank-up Towers

Four Models available: 37, 52, 54 and 70 ft.
Factory Drop-Ship

See HY-GAIN in the Price List

UNIVERSAL Aluminum Towers



UNIVERSAL Model 18-50

50 ft. self-supporting aluminum tower shown installed at the QTH of **W9NHE** in Milwaukee, Wisconsin

FREE STANDING ALUMINUM TOWERS

LIGHTWEIGHT • RUST FREE
EASY TO ASSEMBLE & INSTALL
RUGGED • HAM RADIO, TV/FM

Configurations available from 30-100 ft. with various wind load selections to meet almost any application. Self-Supporting – no need for unsightly guy wires at rated load. Factory Drop-Ship. See Price List and the index for display page for more information.

PHILLIPS Antenna Rotator

▶**U-105** Antenna Rotator Drive unit features a one-piece cast aluminum housing, large bearing surfaces, reinforced mast support and a ball bearing for the vertical load. Precision-cut, hardened steel drive train and high torque– well equipped to handle small to medium VHF/UHF amateur and the largest TV/FM arrays. The control unit is smooth and quiet, fully synchronized with the drive unit by synchronous motors.....**$69.95**

Rotation Range	360° +5°-0	Support Mast Size	1⅛ –2" dia.
Rotation Time	70 Seconds	Control unit	7"w x 5⅞"d x 2⅜"h
Rotation Torque	8 ft./lbs.	Weight (Rotator + control)	10 lbs
Max. Vertical load	100 lbs.	Control cable (4-wire)	Belden 8484

▶**TB-105** Support Bearing for or extra-sturdy installation when using the U-105 rotator. Relieves wear and tear on the drive unit imposed by wind loads. All ball bearing design and weather-tight seal. Installs on the support mast above the U-105 ..... **$18.25**

YAESU Special Rotators

also see p.78

▶**G-5400B** Azimuth-elevation Rotator For satellite, moonbounce, etc. where both horizontal and vertical rotation is required in a single unit. Full 180° rotation.in 58 seconds; 360° azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and masts from 2"–2½" Control box has large dual meters which show separate azimuth and elevation indication with ±4% aiming accuracy. Use Belden 8448 8-wire control cable. .....**CALL**

▶**G-500A** 180° Elevation Rotor For satellites, moonbounce work, etc. Smooth, 180° elevation rotation time: 60 seconds. Large meter with ±3% aiming accuracy. Accepts boom diameters 1¼"–1⅝". Belden 8448 8-wire control cable .....**CALL**

TOWERS & HAZER

- No Tower Climbing
- Work on Antennas from the Ground
- Great for Antenna Experimenters
- PRE-ASSEMBLED WITH ANODIZED ALUMINUM
- 18-8 STAINLESS STEEL HARDWARE
- EASY "WALK UP" INSTALLATION - NO GIN POLES!
- **M-13** = 13" face width; **12 Sq. ft. at 87 M.P.H.**
- **M-18** = 18" face width; **16 Sq. ft. at 87 M.P.H.**
- As Easy as Running a Flag up a Flag Pole
- High Quality, Lifetime investment tower
- Simple installation, no special equipment
- No Rust, or leg freeze breaks
- Great in salt air environment
- Best tower for severe cold + icy conditions
- Repair your antennas whenever you need

You NEED the HAZER The Hazer is a unique tram that rides up & down the outside of your **Martin** tower. Raise and lower your antennas by simply turning a winch crank! Hazer 2, 3, 4, 5, 6 wrap around the tower and works best on 50 ft. and lower towers with kevlar guywires. Hazer 7 incorporates it's own separate track. M-1860A & M-1870A includes kevlar guy wire sets for two levels. Kevlar guys are stronger than steel and electrically transparent.

***COMPLETE* TOWER PACKAGE** INCLUDES: **10-FOOT Tower Sections; Concrete footing; Hinged Base, for walk up erection; HAZER, winch, cable, etc; KEVLAR Guy Wire Kit, turnbuckles, earth screw anchors, hardware; Premium Thrust Bearing, 10-Foot Mast and 8 ft. Earth Ground rod. Shipped motor freight prepaid.**

ALL YOU ADD IS CONCRETE, YOUR ROTATOR AND ANTENNAS!

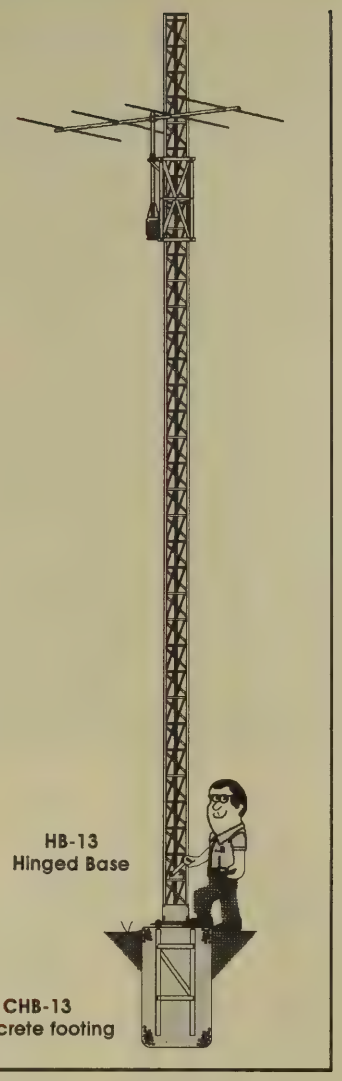
ORDER #	TOWER PACKAGE	FREIGHT PREPAID
M1330A	30 ft., 12 sq. ft., 87 MPH w/Hazer 5	$1539.56
M1340A	40 ft., 12 sq. ft., 87 MPH w/Hazer 5	$1744.56
M1350A	50 ft., 12 sq. ft., 87 MPH w/Hazer 5	$1971.06
M1840A	40 ft., 16 sq. ft., 87 MPH w/Hazer 6	$2047.64
M1850A	50 ft., 16 sq. ft., 87 MPH w/Hazer 6	$2292.64
M1860A	60 ft., 15 sq. ft., 87 MPH w/Hazer 7	$3195.00
M1870A	70 ft., 15 sq. ft., 87 MPH w/Hazer 7	$3485.00

**** HAZERS FOR ROHN 20/25G TOWERS: ****

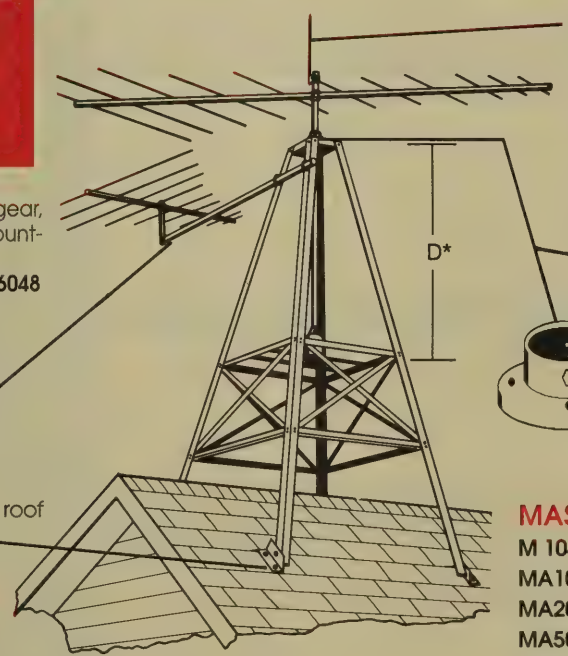
CAT #	MAX LOAD	WIND ABILITY	MADE OF	UPS PPD
H-2	175 Lbs.	12 Sq. Ft.	Aluminum	$339.95
H-3	150 Lbs.	8 Sq. Ft.	Aluminum	$245.95
H-4	200 Lbs.	16 Sq. Ft.	Galv. Steel	$326.95

ORDER TODAY! DROP-SHIPPED READY TO GO

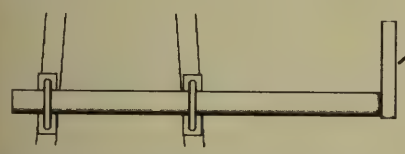
PRICES INCLUDE 48-STATE SHIPPING!



ROOF-TOP TOWERS



Side Arm for adding other antennas, weather gear, etc. 7" high by 1-5/16" diameter mast, U bolt mounting hardware included.
24" Long # **RA-6024** $59.50
48" Long # **RA-6048** $76.50



Set of 8 - 3/8 x 5" **Lag Bolts** to attach tower to roof
LB 3755 Lag Bolt Kit $8.95

LR-8400 Lighting Rod Kit 8' alum. tapered point ground rod, mast clamp & leg grounding Lug **$148.95**
GR-5080 5/8 x 8 ft. copper ground rod **$19.00**
GR-4400 Ground rod wire clamp **$4.85**
TL-0470 Terminal lug for tower leg **$1.65**

#4 Ground Wire (length from tip of mast to ground rod)
CW-2540 25 ft. **$18.25**
CW-7540 75 ft. **$55.00**
CW-1240 125 ft. **$91.25**
CW-5040 50 ft. **$36.50**
CW-1040 100 ft. **$73.00**
CW-1540 150 ft. **$109.50**

Thrust Bearing premium weatherized twin bearing 1.3 to 2.6 mast diameter **TB-25 $79.95**

Mast Adaptor Secures non-rotating masts, 1.3 to 2.1dia. two required, one at tower top & one at base of mast **MC-10 $24.95** ea.

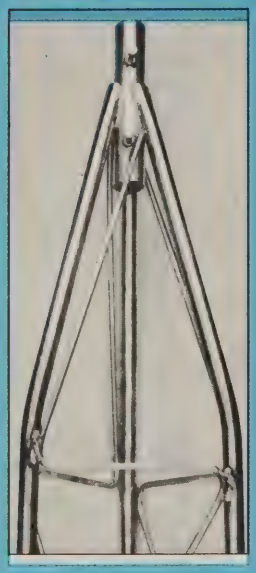
MASTS

M 1049	9' x 2" OD .145 wall galv. steel	30 lbs.	$56.00
MA1049	9' x 2" OD .145 wall alum.	9 lbs.	$64.95
MA2069	9' x 2-3/8" OD .154 wall alum.	12 lbs.	$96.00
MA5050	5' x 1-5/16" OD .145 wall alum.	5 lbs.	$34.95
MA1050	5' x 2" OD .145 wall alum.	7 lbs.	$51.50

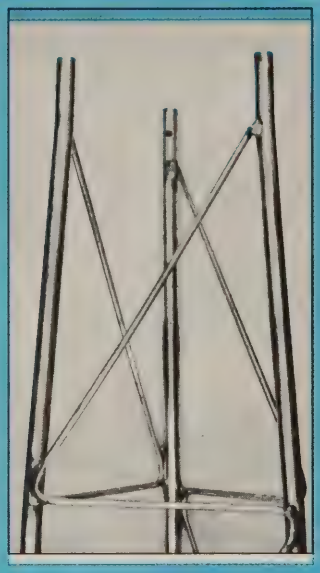
Supports Beams and Quad Antennas
Weather monitors
Scanner & AMSAT Antennas
Aluminum construction
Lightweight yet Extra Heavy Duty
Will not Rust / Stainless Steel Bolts
Four Models to choose from
Made in Boonville, Missouri, USA

MODEL	Height	*D, inches	Base width	Max Ant. in sq. ft. @ 87 mph	100 mph	112 mph	Max. Ant. weight	Shipping weight	Price w/UPS
RT-424	4.5	34.75	24"	6	4.5	3.6	100 lbs.	22 lbs.	$149.95
RT-832	8.0	43.75	32"	8	6	4.8	120 lbs.	36 lbs.	$219.95
RT-936	9.0	43.75	36"	18	13.5	10.5	130 lbs.	78 lbs.	$369.00
RT-1832	17.5	37.62	32"	12	9	7.2	110 lbs.	88 lbs.	$499.95

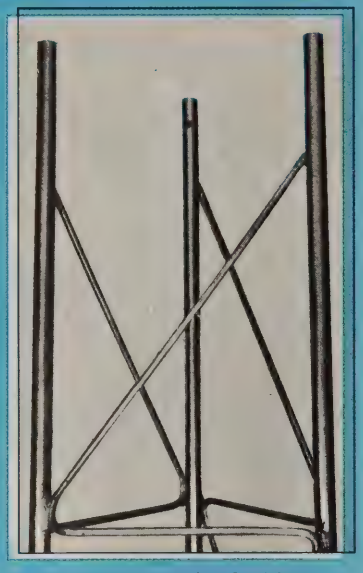
UNIVERSAL TOWERS



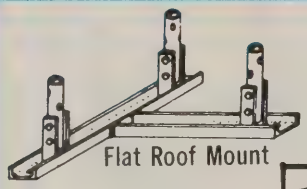
TOP SECTION



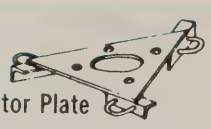
TAPER SECTION



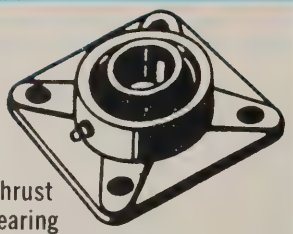
STRAIGHT SECTION



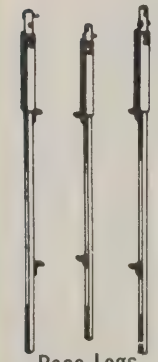
Flat Roof Mount



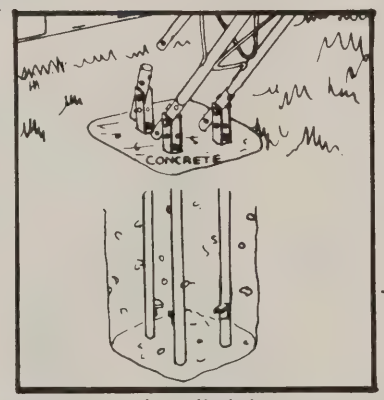
Rotor Plate



Thrust Bearing

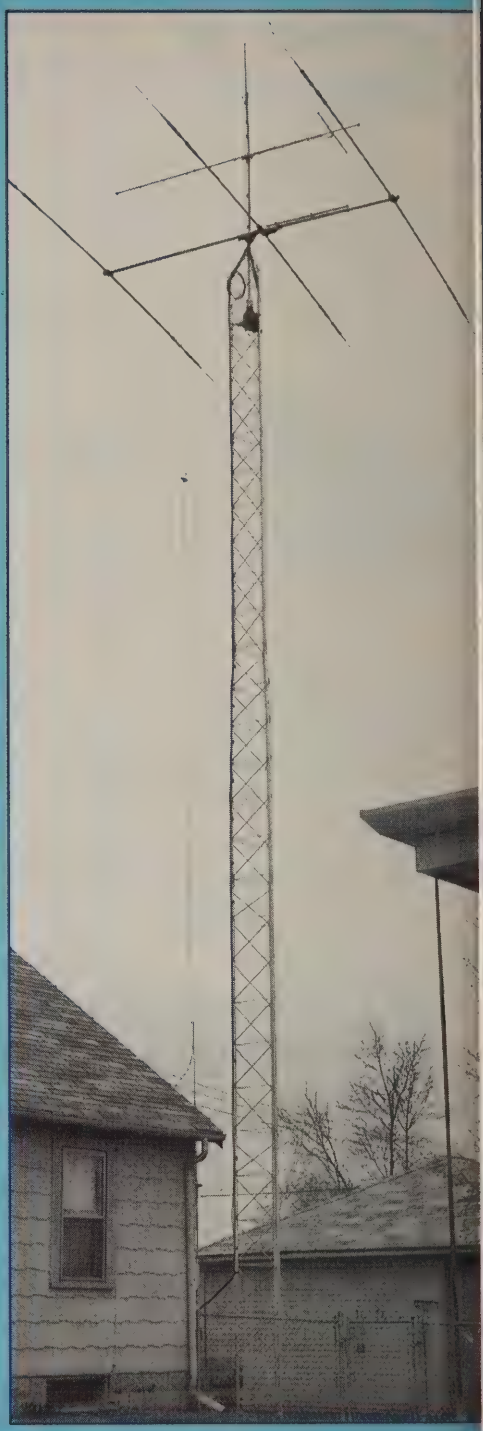


Base Legs



Base Legs installed in concrete showing Hinge-Over feature.

Top Section with Thrust Bearing Plate



Here's a 50 ft. **UNIVERSAL Self-Supporting Aluminum Tower** installed at the QTH of Ted Willett W9NHE. This set up made a **BIG DIFFERENCE** — he really gets out!

Before you buy a tower consider the advantages of Aluminum — it's Strong, Lightweight, Rust Free and easy to assemble and erect.

UNIVERSAL offers 10 ft. sections or complete towers ranging from 30 to 100 ft with a choice of wind load ratings and accessories to meet your specific needs.

A listing and description of UNIVERSAL TOWERS is shown in the Price List. For more info fill out and mail the Coupon along with $1.00 to receive their latest Catalog.

To: **AMATEUR ELECTRONIC SUPPLY®**
5710 W. Good Hope Road
Milwaukee, WI 53223

Enclosed is $1.00 ... please send me the latest UNIVERSAL TOWERS Catalog.

Name _____

Ham Call (if any) _____

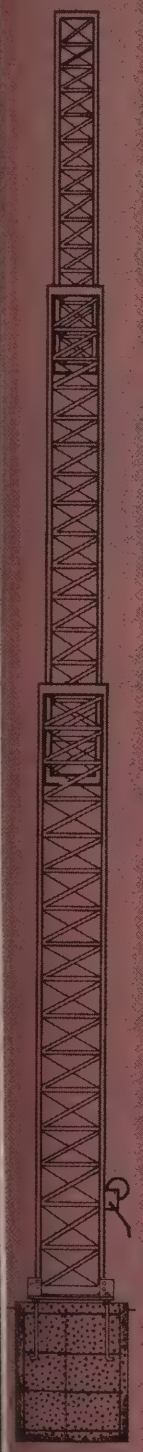
Address _____

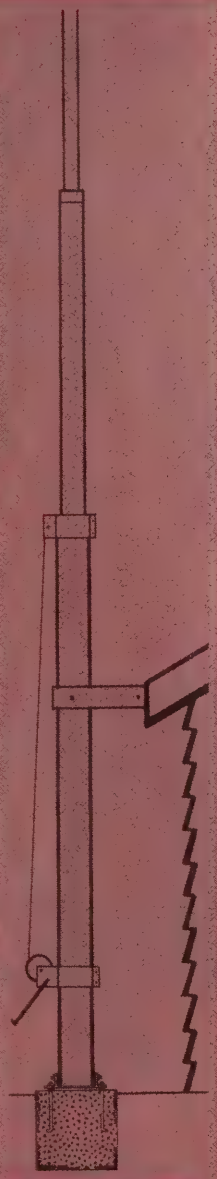
City _____ State _____ Zip _____

We're Dealing on towers!... WE'LL DO OUR BEST TO MEET OR BEAT PRICES ON TOWERS FROM OTHER LEGITIMATE HAM DEALERS – **Call!**

US TOWER CORPORATION

Check out our full line of accessories including: ★ Tower Motor Drives ★ 5' to 20' Antenna Masts ★ 20 ft. Chromolly Masts ★ Thrust Bearings ★ Mast Raising Fixtures ★ Rotating bases ★ Coax arms ★ Limit Switch Packages





MA SERIES CRANK-UP TUBULAR TOWERS

Will handle 10 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
MA-40	40 ft.	21'6"	2	242	3" sq.	4½"	3'x3'x4'	$ 679.
MA-550	55 ft.	22'1"	3	435	3" sq.	6"	3'x3x5'	1069.
MA-550MDP*	55 ft.	22'1"	3	620	3" sq.	6"	3'x3'x5'	2618.
MA-770	71 ft.	22'10"	4	645	3" sq.	8"	3'x3'x6'	2258.
MA-770MDP*	71 ft.	22'10"	4	880	3" sq.	8"	3'x3'x5½"	3572.
MA-850MDP*	85 ft.	23'6"	5	1128	3" sq.	10"	4'x4'x6'	4814.

*Standard bases and eve mounts included with all towers (except MA-770, 770-MDP and 850 MDP
• MDP models complete with heavy-duty motor drive with positive pull down.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TX-438	38 ft.	22'	2	355	12½"	15"	3'x3'x5'	$1019.
TX-455	55 ft.	22'	3	670	12½"	18"	3'x3'x6¼"	1499.
TX-472	72 ft.	22'8"	4	1040	12½"	21⅝"	4'x4'x7'	2529.
TX-472MDP*	72 ft.	22'8"	4	1210	12½"	21⅝"	4'x4'x7'	4068.
TX-489	89 ft.	23'4"	5	1590	12½"	25⅝"	4'x4'x8⅙"	4399.
TX-489MDPL*	89 ft.	23'4"	5	1800	12½"	25⅝"	4'x3'x8⅙"	6598.

*TX-472MDP includes heavy duty motor drive with positive pull down. TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
HDX-538	38 ft	21'6"	2	600	15"	18"	3'x3'x6¼'	$1319.
HDX-555	55 ft	22'	3	870	15"	21⅝"	4'x4'x6½'	2309.
HDX-572	72 ft	22'8"	4	1420	15"	25⅝"	4'x4'x8⅙'	3959.
HDX-572MDPL*	72 ft.	22'8'	4	1600	15"	25⅝"	4'x4'x8⅙'	6048.
HDX-589MDPL*	89 ft.	23'8"	5	2440	15"	30⅝"	5'x5'x8½'	7919.
HDX-689MDPL*	89 ft.	23'8"	5	3450	18"	37⅛"	5'x5'x9½'	15,299.
HDX-5106MDPL*	106 ft.	24'8"	6	3700	15"	37⅛"	5'x5'x9½'	16,649.

*Includes heavy-duty motor drives with dual level wind and positive pull down. MDLP models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antennal at 50 mph winds. HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds

PRICE LIST HAS A COMPLETE LIST OF ACCESSORIES

FREE STANDING "LOW-PROFILE" COMPACT CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11'4"	4	315	10"	18"	3½'x3'x6'	$1089.
TMM-433HD	33 ft.	11'4"	4	400	12½"	20⅞"	3'x3'x5½'	1319.
TMM-541SS	41 ft."	12'	5	430	10'	20⅞"	3'x3'x5⅓'	1429.

* Rotators must be top mounted

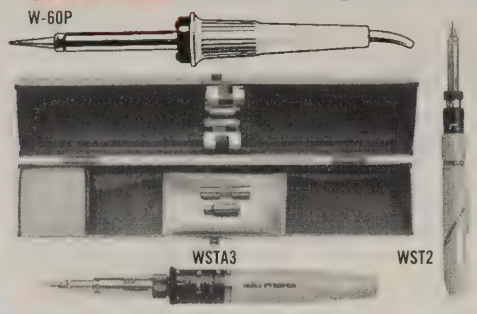
Need More Info?

Get a detailed U.S. Tower Catalog by sending a request and $1.00 to:
Amateur Electronic Supply 5710 W. Good Hope Road. Milwaukee, WI 53223

Tilt-over Base

We're Dealing on towers!... WE'LL DO OUR BEST TO MEET OR BEAT PRICES ON TOWERS FROM OTHER LEGITIMATE HAM DEALERS – **Call!**

WELLER SOLDERING EQUIPMENT



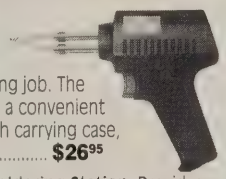
▶**W-60P** 60-Watt Pencil-type Soldering Iron For most electronic circuit work. Temperature controlled with tips available for 600°, 700°, or 800°F. Supplied with 1/16" 700°F screwdriver tip. Only 7½" long, 2½ oz. 6 ft. cord. 120VAC..... **$59.95**

▶**WP-25** 25-Watt Pencil-type Soldering Iron For work on more delicate electronic circuits. 750°F tip temperature. 7⅞" long, 1¾ oz. 4 ft. cord, 120V AC..... **$29.95**

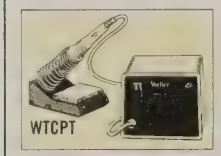
▶**WSTA3** Pyropen® Butane Soldering Iron Lightweight and completely portable. Operates for up to 3 hours on a charge of cigarette lighter butane. Soldering temperature control is adjustable from 392° to 932°F, with fast heat-up time It's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing..... **$74.95**

▶**WST2** Pyropen® Jr. A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. Soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Comes with handy pocket clip **$64.95**

▶**7200PK** A compact, lightweight 75W soldering gun. that handles connectors and almost any other heavier soldering job. The flat, self-supporting back acts as a convenient rest when not in use. Comes with carrying case, extra tip. and solder, 120V **$26.95**



▶**WTCPT** Controlled Output Soldering Station Provides three temperature ranges: 600°F, 700°F and 800°F. This lightweight pencil iron is safe for IC soldering. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge. ... **$109.95**



▶**EC-1002-1** Soldering Station Compact, the soldering pencil stand connects to right or left side of unit. Variable temperature diode display, self feeding reservoir. Convenient tray stores extra temperature sensing tips.. **$189.95**

When Calling always ask about...

- **Late Breaking "Hot Deals"**
- **Latest Sale Prices**
- **Monthly Specials**
- **Coupons, etc.**

Information also available on the AES® BBS (414) 358-3472

"Hi!... I'm Rick, N9PMR"

Phone in during afternoons for least chance of finding busy lines!

WAHL SOLDERING EQUIPMENT

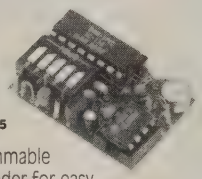
▶**7740** Cordless Soldering Iron Tip performance up to 50 watts and over 700°! Contains a premium nicad battery for high-rate charging; a partially discharged unit will return to full capacity within 1–2 hours, with a complete recharge in 3–4½ hours. Replaceable battery and worklight. Comes with recharging stand, fine and heavy tips..... **$34.95**

▶**7980** Butane-Powered Soldering Iron & Torch Cordless and refillable, features a rugged aluminum body and even-flow valve for uniform flame. Uses standard high quality cigarette lighter butane. Up to 100 minutes of continuous solder per refill with adjustable tip temperatures up to 1067°F. Up to 60 minutes of continuous torch flame with adjustable temperatures up to 1300°F. Includes 2.4mm tip and protective cap with igniter .. **$29.95**

▶**7985** Butane-Powered Soldering Iron Kit Pack The Soldering Iron & Torch in a convenient, versatile kit pack with protective igniter cap, torch attachment, 2.4mm and 1.00mm tips, wiping sponge/well, and in-use stand/rest in a protective reusable carrying case **$49.95**

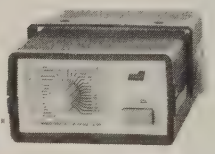
Communications Specialists

TONE ENCODER & DECODERS

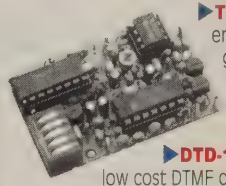


▶**SS-32P** Dip switch programmable encode provides 32 standard or EIA tone frequencies in order between 67 and 250 Hz. Microminiature – fits inside most portable transceivers. 0.9" x 1.3" x 0.4", 6 to 25 VDC .. **$28.95**

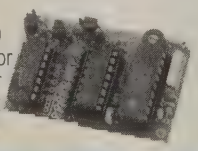
▶**SS-32SMP** A Super small programmable CTCSS encoder for easy installation in most handhelds. Comes standard with 32 EIA tones between 67 and 203 5 Hz. Individual tones are selectable by soldering binary coded jumpers. 0.53" x 1.0" x 0.16", requires 6 to 15 VDC **$27.95**



▶**TE-64** Multi-purpose encoder providing 64 frequencies which include 32 sub-audible, 19 burst-tone, 8 Touch-Tone and 5 test frequencies. Separate outputs for the high and low frequency ranges. 5¼" x 3.3" x 1.7", 6–30 VDC..... **$79.95**



▶**TS-32P** Field programmable CTCSS encoder-decoder. DIP switch programmable. All 32 EIA tones from 67-203.5 Hz are included in std. memory. 1¼" x 2", 0.4" requires 6 to 25 VDC **$57.95**



▶**DTD-1** A very small high quality, and low cost DTMF decoder. Capable of decoding any one of 5,040 four digit codes to provide a latched or momentary open collector output for single function operations. Only 1¼" x 2" x 0.4"; requires 6–12 VDC.... **$59.95**

PIPO Communications

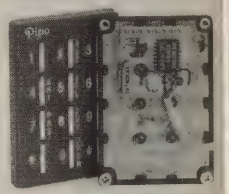
HIGH QUALITY DTMF ENCODERS

- 12-digit or 16 digit pads
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained
- NO RFI
- Simple 3-wire connection
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic

• **PK-1** 2.65"h x 2"w x .045" – • **PK-2** 2.65"h x 2.5"w x 045"d

K-Series option: features a built-in keying circuit and relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for 0–3 seconds, time is adjustable with a trimpot.

M-Series option: a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. Consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.



P-7V Features similar to the K-Series but rugged-design for the demanding Land Mobile Industry. The choice for radios or systems exposed to harsh or abusive environments. Features miniature electronic design, low distortion, adjustable audio output 12-key, verical. format, 2.16"h x 1.50"w x 0.20"d.

For Prices see PIPO in the Price List

Replacement Tubes

EIMAC

3-500Z	ea. $183.00
3CX800A7	412.00
3CX1200A7	665.00
4CX250B/7203	131.00
8873	458.00
8874/3CX400A7	439.95
8875	499.00
8877/3CX1500A7	935.00

MISC.

6146B	$14.95
3-500G (High dissipation)	99.95
572B	49.95
811A	14.95

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Mail or Fax Your Order To:

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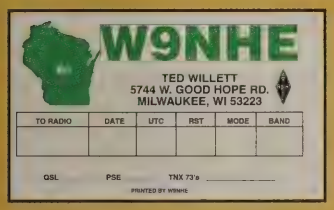
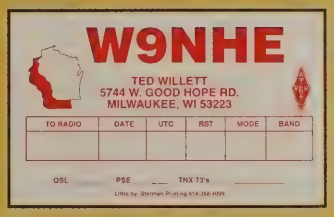
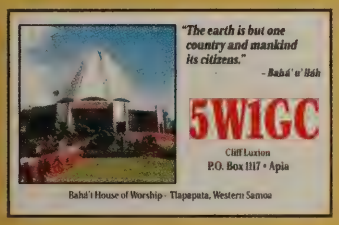


2 COLOR CARD

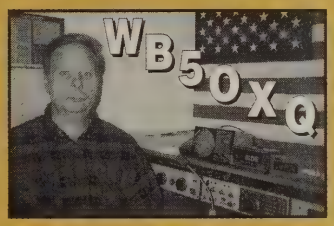


BASIC CARD

QSL Cards measure 3-1/2 x 5-1/2 and are printed on 10 point coated white stock. Basic cards come in your choice of black, red, blue ink and may include 2 pieces of stock artwork. Options include: home state, ARRL member logo, antenna, or American Flag. TO INCLUDE A PHOTO, BACKSIDE PRINTING OR 2 or more colors, PLEASE SEE ADDITIONAL CHARGES. Special designs/4 COLOR CARDS are ALSO available!



4-COLOR CARD



PICTURE CARD

KARY & LAURA

JOHN, Ted (W9NHE) & Jim

Date: _____ PHONE: _____

Make Checks Payable to STERMAN PRINTING

PLEASE PRINT EXACTLY AS IT IS TO APPEAR ON CARDS

CALL: _____ COUNTY: _____ GRID SQUARE NO: _____

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 2)

- ☐ ARRL LOGO
- ☐ STATE LOGO
- ☐ ANTENNA LOGO
- ☐ USA FLAG LOGO
- ☐ BLACK
- ☐ RED
- ☐ BLUE
- ☐ SURPRISE ME!
- ☐ 100 - $24.50
- ☐ 250 - $31.50
- ☐ 500 - $37.50
- ☐ 1000 - $52.50
- ☐ FULL COLOR 1000 - $425.00
- ☐ I am sending additional clean black & white art (5x7 or less) Bill me **$10.00 each** for additional piece(s) of artwork
- ☐ **2 COLOR CARDS/BACKSIDE/PICTURE PRINTING** – Add **$22.00 for each** to Base Quantity Price (Please designate color breaks, send photo and/or copy for backside - *picture cards will be black & white unless specified.*

☐ CHECK ☐ MASTERCARD ☐ VISA ☐ AMERICAN EXPRESS

Card No.: _____ Exp. Date: _____

Signature: _____ Date: _____

QUANTITY PRICE: _____

2 COLOR OPTION: _____

BACK SIDE PRINTING: _____

PHOTO OPTION: (send photo) _____

UNIQUE LOGO: (send art) _____

SUB TOTAL: _____

SHIPPING & HANDLING: 4.50

$2.00 ADDITIONAL IF OUTSIDE CONTINENTAL US

SALES TAX: _____

__ WI - 5.5% __ FL - 6% __ NV - 7% __ OH - 5.75%*

*NO TAX ON SHIPPING FOR OHIO RESIDENTS

TOTAL: $_____

We need your street address to ship UPS! Please Include It!

AMATEUR ELECTRONIC SUPPLY®

Used Amateur Radio Equipment List

★ Fully Service Tested ★ 10 Day Trial ★ 30 Day Guarantee ★ Full Credit within 90 Days on Higher Priced New Equipment ★ Only Clean Gear Accepted in Trade ★ The Finest Available ... Anywhere!

Note: This Used Equipment List reflects what was in our inventory when this catalog was printed. We trade, buy and sell a tremendous amount of used equipment, s this is only a representation of what may be available at any given time. Each store (except Clearwater) has immediate on-line computer access of the entire AES use gear inventory by location–one phone call is all that is needed to see if an item is in stock. The letters after the price indicate which location had the particular item a the time of inventory: **m** = Milwaukee; **w** = Wickliffe; **f** = Orlando; **c** = Clearwater; **v** = Las Vegas. + after item denotes too many accessories to list.

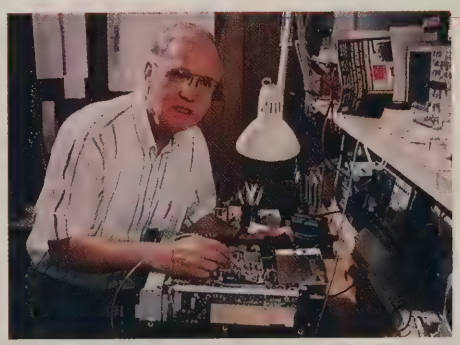
AEA
Log Windows software.$69 m
RL-1 radio link .....199 m
ALINCO
ALR-22T 25w 2m.....$229 m
DR-600TB 2m/440 .... 459 f
EBP-18N battery.....39 m
EDC-16 chgr.....9 m
EDC-19 remote kit.....29 w
EDC-36 mobile cord .....14 m
ALPHA DELTA
MACC outlet strip .....$19 w
AMERITRON
AL-80A 1kw hf amp...$749 c
AL-80B 1kw hf amp.....849 m
AL-811 600w hf amp ..569 c
ASTRON
RM-60A 50a p/s .....$269 c
RS-20BB 16a p/s .....85 f
RS-35A 25a p/s.....119 v
2412 24-12V/9amp.....39 m
AZDEN
PCS-7500H 50w 6m..$309 m
B&W
VS-300A 300w tuner ...$69 m
BELMERIT
DM-3050 dmm .....$39 m
DRAKE
R-8 receiver.....$679 m
GRUNDIG
SATELLIT 500 swl .....$289 m
SATELLIT 700 swl.....349 w
YACHT BOY 230 swl.....69 v
YACHT BOY 235 swl.....79 m
YACHT BOY 500 swl.....189 v
HY-GAIN
12AVQS 10-20M vert ...$69 m
2400-155 headset/mic ..59 f
ICOM
AD-15 p/s .....$19 m
AH-2 w/mt & whip.....449 w
AH-2A auto tuner.....349 mf
BC-30 desk chgr .....29 m
BC-73E 220V chgr.....39 w
BC-74 charger.....17 m
BP-113 7.2V/1200ma ...59 m
BP-174 12V 600ma .....69 w
BP-2 425ma 7.2V batt ..20 m
BP-4 alkaline case .....12 m
CT-17 interface .....69 c
DC-1 dc module 2AT.....19 m
EX-1514 vox unit .....55 fv
HM-9 spkr/mic .....29 m
IC-1201A 10w 1.2g .....499 m
IC-1271A 2m all mode .899 c
IC-2400A 2m/440.....479 m
IC-25H 2m 40w mob ...239 v
IC-2700H dual band....639 m
IC-271H 100w 2m/ssb .769 mc
IC-275A 2m 25w all mode .879 mc
IC-275A w/tcxo .....929 m
IC-3200A 2m/440.....379 m
IC-3230A w/ut55,67 ....519 v
IC-47A 440 moblie ....$279 v
IC-728 HF xcvr .....749 c
IC-735 HF xcvr.....719 m
IC-736 HF xcvr/6m ....1549 w
IC-737 HF xcvr.....879 v
IC-751 HF xcvr.....799 c
IC-751A HF xcvr.....899 c
IC-765 HF xcvr.....1699 v
IC-781 HF sn1276 .....3999 m
MB-32 mount brkt.....9 f
PS-20 p/s w/cc1.....149 m
PS-45 power supply.....99 m
R-1 w/BP-90,AD-14.....449 w
R-100 100khz-1.8g .....499 w
R-100-11 blocked .....479 c
R-71A w/pbt swl.....699 f
R-71A swl.....689 c
SM-8 dlx desk mic.....79 c
JPS
NF-60 filter.....$99 fc
NIR-10 filter .....199 mw
SSTV-1 sstv filter.....119 m
KANTRONICS
Hostmasterll+ .....$49 m
KENWOOD
AT-440 auto tuner.....$189 f
DC-21 dc conv TH21.....15 m
DFC-230 dig vfo .....99 m
HS-6 headset.....39 w
KNB-7A 12v battery.....50 w
MC-50 desk mic .....49 m
MC-90 desk mic .....169 c
PC-1A phone patch .....89 v
PS-30 power supply.....119 mfv
R-2000 swl rcvr.....499 mw
R-2000 w/VC-10 conv .559 m
R-5000 swl reciever ....699 mw
R-5000 swl/am/s.m. ...749 w
R-5000 swl/am/sn fltr .759 w
R-5000 w/cw/VC-20....859 f
R-5000 w/DC/VC-20 ...839 c
SM-220 scope/BS-8 ....319 v
TH-27A 2m ht.....239 w
TM-201B 2m mobile....249 v
TM-231A 2m 50W.....279 c
TM-231A w/TSU-6 .....299 m
TM-241A 2m 50W.....289 w
TM-2550A 45W 2m.....289 wv
TM-2550A (no brkt) .....279 m
TM-2550A w/TU7/VS1 .329 m
TM-421A uhf mobile....269 v
TM-441A uhf mobile....349 m
TR-7850 40w 2m mob ..199 m
TR-7930 25w 2m mob ..249 w
TS-440S/AT HF xcvr .....939 m
TS-50S HF xcvr).....829 m
TS-60S 6M cw/so-2 .....899 m
TS-690S HF xcvr/6M ..1149 c
TS-830S HF w/2cw .....739 v
TS-930S/AT HF xcvr .....999 m
TS-940S/AT HF xcvr ...1399 m
TS-950SDX HF xcvr....2999 m
UT-28S 10M module....219 m
VFO-120 remote VFO ...$79 c
VFO-700S remote VFO ...79 m
VFO-230 remote VFO ...149 v
MFJ
1020A indoor act ant.....$39 c
1022 act rx antenna.....19 m
1224 interface.....69 m
1272BYH tnc/sw.....29 w
1272MX tnc/sw .....29 w
1305 5V power supply .....9 w
1312 12V power supply ...9 w
1312B 12V p/supply.....9 f
207 160-10 analyzer .....59 f
208 2m swr analyzer .....59 f
247 swr analyzer .....119 m
249 swr analyzer .....139 f
283 speaker mic.....19 w
411 morse tutor.....49 m
4114 p/s for cw xcvr .....39 m
451X cw keyer.....59 w
486 Super Grandmaster ...99 m
624D phone patch.....65 mf
752C tunable filter.....69 w
784 DSP filter .....149 wm
816 swr power meter.....23 w
931 artificial ground .....49 m
949E 300W ant tuner ....99 mv
959B rx tuner/preamp ...59 m
MIRAGE
MP-1 HF wattmeter .....$99 v
NEWTON TVRO
GBS2000 sat test set $149 w
NYE
047-002 patch .....$89 m
PALOMAR
PT-340 Tuner-Tuner .....$69 mv
PANASONIC
RFB-65 swl portable..$129 c
RANGER
RCI-2970 10m xcvr ...$319 mw
SANGEAN
ATS-818CS swl rcvr...$179 m
SGC
SG-2000 HF xcvr.....$1199 m
SG-2000 w/remote ....1249 m
SONY
AN-102 active ant .....$49 w
ICF-SW1S swl rcvr .....199 m
ICF-SW55 swl rcvr .....279 w
ICF-SW77 receiver .....359 mc
ICF-2002 receiver .....149 mw
ICF-2010 receiver .....289 wc
PRO-80 scan rcvr .....299 w
STANDARD
C108A 2m mini-HT.....$179 mw
C168A 2m HT.....249 w
C5608DA 2m/440mob....569 m
C628A w/CNB-151/cmp..629 w
CLC-550 case .....15 m
CNB151 7.2v 700m batt...43 w
CMU-160 memory exp.....10 w
CSA-181A rapid chgr.....99 w
STARTEK
ATH-50 frequency counter$239 f
15BG freq/counter.....139 f
15UHS freq/counter.....119 f
TEN-TEC
585 Paragon hf xcvr $1229 f
TIMEWAVE
DSP-9 dsp filter.....$109 m
UNIDEN
BCT-2 scanner.....$89 v
BC-590XLT scanner ....149 c
YAESU
CSC-29 case for ht.....$14 w
E767 cable/FL-7000.....15 wf
FBA-3 battery .....$19 w
FC-757AT auto tuner ...299 c
FNB-33 4.8V/1200 mah .59 m
FP-12 power supply .....99 v
FP-757HD p/supply.....219 c
FRB-757 relay box .....9 mf
FRG-100 SWL rcvr .....439 m
FRG-8800 SWL rcvr .....529 mv
FT-11R 2m 1.5w ht.....239 mw
FT-2400H 2m/50W.....289 v
FT-2500M 2m/50W.....289 c
FT-2700RH 2m/70cm ..349 c
FT-41R 70cm HT.....299 m
FT-411E 2m 2.5w ht ....229 w
FT-51R 2w dual band ht$229 m
FT-690RII (no brkt) .....519 m
FT-747GX hf mobile.....549 v
FT-767GX w/2m,440..1579 c
FT-815 uhf ht.....239 m
FT-8500 2m/70cm .....549 m
FT-990DC hf xcvr.....1399 w
FV-700DM remote VFO...79 m
MD-1B8 desk mic.....89 f
MMB-20 mob mt/FT-757 19 w
MMB-38 mobile mount..12 f
YSK-4700 Keyboard.....29 w
YS-60 wattmeter .....69 f

This Used Equipment list & the Demo Equipment list on the next page were prepared from an actual inventory taken on 10/10/95. Availability & Prices are subject to change without notice.

■ **TRADE-INS** We will take your clean late model SSB or FM gear in trade towards New Equipment shown in this catalog, or we will buy it outright for Cash – write or call for a quote. In order to receive the full value as quoted, your equipment must arrive at our location in good electrical and physical condition, free from abnormal wear, defects, modifications, corrosion and smoke residue. The manual and any original accessories that came with the unit must be included. Note: We do not take in data controllers,UHF/VHF amplifiers or antennas. Hand-held radios quoted in store only.

■ **USED EQUIPMENT** After the purchase and receipt of USED equipment, there is a 10-Day Trial. During this period, if the equipment you received is unsatisfactory for any reason, you may return it for a refund, less shipping charges – both ways. If there is a defect, repair parts and labor are covered under a 30 Day Warranty. Return the equipment to the store it was purchased from, prepaid and insured. We will correct the defect and return it at no charge. Within 90 days after you receive our shipment of USED equipment, we will allow you Full Trade-in toward Higher Priced NEW equipment. To qualify, the condition of the item must be as it was when you originally received it from us.

Call our 24-hour BBS (414) 358-3472
for Latest Updates on Used/New Equipment, Open Cartons & Demos
or... **call any AES® Store** - ***We're Computerized!***



Miles-K9HMQ, our Service Manager makes sure all used gear meets original specifications before for it's shipped out.

JEFF- N9EDQ
Checked, bagged, ready to go!

TERRY W9DIA
Circa 1962

Terry, the Original King of Traders, began the tradition of Quality Used Gear more than 38 years ago. The standard was set, and the tradition continues on...

Save on New Equipment Open Cartons and Demos

The following is a list of brand New Equipment that has been demonstrated, on display or restocked. The cartons are no longer factory sealed, but each piece has been checked out in our service department and carries a 100% New Warranty. The letter after the price is the location at the time of inventory. **m** = Milwaukee; **w** = Wickliffe; **f** = Orlando; **c** = Clearwater; **v** = Las Vegas. Limited quantities – Order Now! Used equipment policies do not apply.

AEA Special
ISOLOOP 10-30 loop antenna ..... $296.95 m
DSP-2232 multimode controller ..... 849.95 f
IT-1 automatic tuner for ISOLOOP ..... 214.95 mf
MacRatt w/Fax Mac prog PK-88/232 ... 58.95 m
PCB-88 TNC card & software for IBM 143.95 m
PC Pakratt II IBM program..... 50.00 f
PK-12 1200 bps packet controller..... 109.95 m
PK-232MBX VHF/HF packet controller. 269.95 m
RL-60 radio link HF remote via HT ..... 259.95 v
SWR-121 HF antenna analyzer ..... 314.95 m

ALINCO
DJ-180TH 2m 5W FM HT ..... $209.95 f
DJ-580T 2m/440 FM HT ..... 349.95 f
EBP-20N 7.2 700ma battery ..... 45.95 v
EBP-6N battery ..... 39.95 m
EME-10 headset w/vox/ptt ..... 61.20 w

AMECO
OCM-2W code practice oscillator ..... $19.95 m
TPA tunable preamp. ..... 64.95 m

ASTRON
RS-4L 3a ps 4A surge w/lighter socket .. $44.95 v
VS-35 25 amp power supply ..... 152.95 v

AZDEN
AZ-61 5w 6m HT..... $379.95 m
PCS-7000H 50w 2m mobile xcvr..... 332.95 m
PCS-7500H 50w 6m mobile xcvr..... 386.00 w
PCS-7800H 50w 10m mobile xcvr..... 349.95 m

B&K
2005A RF generator ..... $209.95 m
2830 digital multimeter ..... 129.95 m
2911 digital multimeter..... 39.95 m

B&W
AP-10 portable hf antenna..... $59.95 m
AXS-80 80/40/15M 64' dipole ..... 89.95 v
FL-10/1500/70 low pass filter (72Ω) .. 16.95 m

BENCHER
ST-1 single lever paddle ..... $54.95 m

BIRD
43P peak reading directional wattmeter..$325.00 m
4304A 25-1000 MHz 500W w/smplr....419.00 m

CES
SDI-50 autopatch/controller ..... $359.95 m
410 personal patch autopatch .....149.95 mf

COMET
CM1200 1.2GHz mini-meter..... $64.95 f
CM-300 220MHz min-meter..... 29.95 f
MS3FVMM mag mt w/SO-239..... 35.95 v
SB-25NMO 2m 4.1db 4'8" mobile ant.. 44.95 v

CONNECT SYSTEMS
CS-800 full duplex patch/rptr cont .. $315.00 w
PRIVATE PATCH V interconnect..... 379.95 m

CUSHCRAFT
APR-18A radial kit ..... $56.95 v
CS-1147M 2m 1/4 wave mag mt ant. 35.96 w
CS-50M 6m mag mt antenna ..... 53.95 v
PS-4 polarity switch ..... 89.95 m
22NSK stacking kit for (2) 17B2s ..... 99.95 m

DAIWA
CN-101 1.8-150mhz SWR/power meter....$79.95 m

DIAMJOND
K-400M hatch/trunk mount .....$69.95 m
MX-72N duplexer..... 52.95 m
K-700HA 2m/440 24 ft. antenna..... 349.95 m

DIGIMAX
D-612 12GHz 9-digit counter .....$199.95 m

DRAKE
R-8 shortwave reciever.....$849.95 wf

GRUNDIG
SATELLIT 700 swl receiver .....$339.95 mf
YACHT BOY 206 swl portable receiver ...71.95 w
YACHT BOY 235 swl portable receiver ...89.95 w
YACHT BOY 400 swl portable receiver.$179.95 w

HEIL
HM10-5K mic for Kenwood ..... $74.95 m
TB-1 mic stand only for HM-10 ..... 11.50 v

HY-GAIN
300 HDR-300 heavy duty rotor..... $836.95 v
305 AR-40 (220 volt version)) rotator 176.95 f

ICOM
AD-12 external power adapt 2GAT.....$27.50 m
AD-15A power supply .....26.95 m
AT-150 auto tuner.....475.00 mw
BP-110 alkaline battery case.....22.950 m
BP-159 alkaline battery case.....22.00 w
BP-2 425ma/7.2V nicad battery ..... 49.00 m
BP-84 7.2v 1000ma battery ..... 77.95 m
BC-79A desk charger ..... 134.95 m
CP-13L cigarette lighter cord .....29.00 w
CT-17 CI-V level converter..... 99.95 m
GP-22 GPS receiver ..... 399.95 m
HM-46 speaker/microphone ..... 45.00 m
IC-T21A 2m HT w/440MHz receive ..... 269.95 wf
IC-W21AT 2M/440mhz HT/ttp ..... 359.95 w
IC-W31A 2M/440mhz HT/ttp ..... 379.95 m
IC-03AT 220 mhz FM HT .....299.95 m
IC-2GXAT/HP 7W 2m FM HT ..... 269.95 m
IC-2340H 2m/440MHz FM mobile ..... 469.95 f
IC-2700H 2m/440MHz FM mobile ..... 719.95 m
IC-4iA 440MHz FM HT ..... 149.95 m
IC-4SAT 440MHz FM HT ..... 329.95 cv
IC-575H 100W 6m all mode xcvr.....1499.00 f
IC-735 100W HF xcvr.....1079.00 f
IC-781 HF xcvr w/scope/tuner/keyer ..5399.00 mf
IC-781 HF xcvr w/UT-36 voice #1089.. 4995.00 w
IC-901A 50W 2m/35W 440MHz mobile ..839.95 f
M-11 5W marine band HT ..... 314.95 w
M-5 5W marine band HT ..... 299.95 m
M-56 25W marine band ..... 299.95 m
PS-30 25A power supply..... 279.00 w
RP-4020 25W 70CM repeater.....1529.00 v
R1-15 .1MHz-1.3GHz hand held rcvr...479.95 mf
R100-11 .1mhz-1.856GHz rcvr..... 593.95 fv
SM-8 deluxe desk mic .....121.95 m
SP-21 external speaker .....89.95 m
SP-7 small external speaker.....61.20 w
UT-84 tone squelch IC-2700H .....72.00 v
UT-85 tone squelch IC-2000H .....55.00 m

JPS
NF-60 Auto DSP audio notch filter.....$134.95 m
NIR-10 Dlx noise/notch DSP filter.....249.95 m

KANTRONICS
KPC-4 Dual port vhf packet controller. $199.95 m
KPC-9612/128K 1200/9600bps .....197.95 m
HOSTMASTER MAC software.....59.95 m

KENWOOD
AT-300 external auto tuner ..... $539.95 m
DFK-4 13' remote cable for TM-742A .. 49.95 f
IF-232C level translator .....107.95 mv
KSC-14 rapid charger TH22/79 .....79.95 f
MC-85 desk microphone .....139.95 m
MC-90 deluxe desk microphone .....199.95 mv
PB-18 1100mah 7.2v battery.....78.95 v
PB-32 600mah 6v battery.....58.50 v
PG-3H cig liter cord TH22/79.....29.95 m
PS-31 power supply TS-790 ..... 161.95 m
PS-52 HD power supply TS-850..... 242.95 m
PS-53 HD power supply TS-450..... 214.95 m
R-5000 swl receiver ..... 999.95 m
SM-230 mon scope TS-850/950.....929.95 m
SP-23 external speaker ..... 79.95 v
SW-2100 1.8-30MHz 2KW meter ..... 134.95 m
TH-22AT 2M 3W FM HT .....242.00 mw
TH-79A(D) 2M/ 440 HT .....419.95 m
TM-255A 2m/FM/SSB mobile xcvr .... $809.95 m
TM-441A 70CM 35W mobile xcvr..... 449.95 m
TS-450S/AT 9 band hf xcvr/tuner .....1199.95 mf
TS-690S HF xcvr/6M ..... 1399.95 m
TS-790A 2m/440 FM/SSB base xcvr .. 1699.95 m
TS-950SDX HF xcvr/tuner w/DSP..... 3599.95 v
UT-28S 50w 10m module/TM-742A.... 279.95 f
UT-440S 35W 440 module/TM-742A.... 260.95 f

KLM
CS-2 circularity switch..... $69.95 m

MAGELLAN
MERIDIAN XL gps unit ..... $269.95 m

MFJ
1020A indoor active rx antenna ..... $72.00 w
1022 active rx antenna ..... 35.95 m
1040B Deluxe receiver preselector .....89.00 m
1214PC Multimode interface for IBM ..124.95 m
1229 interface.....79.95 m
1270CQ packet TNC w/9600 baud ..... 179.95 m
1271 packet card C-128/64..... 44.95 m
1272BYV TNC/Mic switch KAM/vhf..... 34.95 m
1278B packet/pactor multi-mode ..... 239.95 m
1282B multicom software C-64/128.....34.95 m
1289M multicom software IBM ..... 53.95 m
1290 multicom software AMIGA..... 34.95 m
1621 40-10M portable antenna ..... 62.95 m
1786 Super HI-Q loop ant. w/dlx control 239.95 m
346 LCD freq counter .....139.95 v
407C electronic keyer .....59.95 f
422C bencher keyer/paddle combo .....112.95 m
422CX keyer only .....67.95 v
432 voice keyer unit.....84.95 m
462B RTTY/ASCII/CW/AMTOR reader ...134.95 v
492 menu driven memory keyer.....79.95 m
492X menu driven keyer .....94.95 m
624D phone patch .....76.95 m
722 SSB/CW notch filter..... 67.00 mw
924 440MHz 300w tuner/swr/wattmeter.....62.95 v
931 artificial ground .....67.95 m
941 300w tuner.....89.95 v
956 LW/MW/SW preselector/tuner .....34.95 v
959B Receiver ant tuner w/preamp .....79.95 mw

MIRAGE
C-1012G 220MHz 10/120W amp..... $269.95 m
KP1/2M 2M in shack preamp .....109.95 m
MP-3 420-450MHz 500W PEP meter ..214.95 m

MOTOROLA
H-5111A marine hand held radio .... $269.95 m

NYE
020-001 low pass filter ..... $39.95 m
047-001 phone patch, 8-pin w/spkr ...89.95 v
MBIV-A1 3KW tuner without balun .....431.95 v

OPTOELECTRONICS
SCOUT/400 10-2800mhz counter.....$399.95 m
3300 mini 10-digit counter.....125.00 v

OUTBACKER
PERTH 7.5' mobile antenna.....$246.95 v

PANASONIC
RF-B45 SWL portable receiver..... $152.95 m
RF-B65 SWL portable receiver.....159.95 m

PERIPHEX
BP-8S battery (ICOM 2AT/02AT) series .. $58.50 m
EBP-22S battery (ALINCO 580/180) .....58.95 m

RF CONCEPTS
2/70H 2m/440 20/200 & 20/100 amp ..$647.95 v
3-312 220MHz 30/120W amp .....269.00 w
4-32 440MHz 3/20W amp .....134.95 m

RANGER
RCI-7000 marine xcvr .....$144.95 w
RCI-9000 marine xcvr .....159.95 mf
RCI-2950 10M mobile xcvr.....233.95 m

SANGEAN
ATS-202 SW receiver .....$79.95 m
ATS-800 SW receiver .....69.95 f
ATS-803 SW receiver .....149.95 c
ATS-808 SW receiver .....152.95 wf
DT-200V receiver .....59.95 m

SGC
5547 QMS-2 system w/SG-230/303 .. $769.00 w

SONY
ICF-7700 portable SW rcvr .....$149.95 wv
ICF-SW15 portable SW receiver ..... 64.95 m
ICF-SW30 portable SW receiver .....89.95 m
ICF-SW77 deluxe portable SW rcvr .... 399.95 m
ICF-SW7600G port SW receiver .....179.95 m
IPS-360 GPS unit..... 329.95 m
IPS-760 deluxe GPS unit..... 699.95 m

STANDARD
C-158A 2M FM HT.....$219.95 m
C-168A 2M FM HT..... 279.95 m
C-188A 2M FM thin HT ..... 259.95 mf
C-288A 220MHz FM HT..... 328.95 mv
C-558A 2m/440MHz FM HT ..... 519.95 f
C-5608DA 50w 2m/40w 440 mobile.....648.95 wc

TIMEWAVE
DSP-59 PLUS dsp filter.....$52.95 w

UNIDEN
BCT-2 Bear Tracker scanner ..... $99.95 wv
BCT-7 pre-programmed scanner .....154.95 v
BC-177XLT 16ch scanner .....99.95 f
BC-178XLT 100 ch scanner .....116.95 m
BC-2500XLT 400ch handheld scanner .269.95 w
BC-3000XLT 400ch handheld scanner 329.95 m
BC-55XLT 10ch handheld scanner .....69.95 w
BC-70XLT 20ch portable scanner..... 89.95 m
BC-80XLT 50ch portable scanner..... 89.95 v
BC-860XLT 100ch w/air/800MHz ..... 152.95 m
MC-790 marine mobile xcvr ..... 179.95 m

UST (Truck ship/milw pick-up only)
HDP service platform/HDX555 NEW! .$499.95 m

VECTRONICS
VC-30UV mini-meter .....$74.95 m
VC-300D 300W digital meter .....169.95 m
VC-300M 300W mobile meter.....109.95 m

WILMORE
1365 24-12V 10a converter .....$89.95 m

YAESU
DVS-2 digital voice recording unit ....$259.95 m
CSC-53 soft case FT26/76 w/FNB25.....18.95 f
CSC-61 soft case FT11R w/FNB33/38 ....18.95 v
FC-757AT auto tuner .....479.95 f
FL-7000 hf amplifier w/tuner.....1999.95 m
FNB-14 1000ma 7.2V battery.....63.95 v
FNB-26 1000ma 7.2V battery.....72.00 w
FNB-27 600ma 12V battery.....69.95 m
FNB-38 600ma 9.6V battery.....74.95 m
FT-2200 50W 2M fm mobile .....339.95 m
FT-51R 2m/440 HT .....439.95 m
FT-811R 440 HT.....179.95 w
FT-900/AT HF xcvr/tuner .....1289.95 m
G-2700SDX heavy duty antenna rotor ..729.95 m
LL-5 phone patch for SP-6 .....134.95 m
MH-15D8 microphone.....72.00 w
MH-18A2B microphone.....35.00 w
MMB-54 bracket.....22.50 w
MR KIT-1 rack mount for VXR rptrs.....179.95 m
MW-2 remote mic .....125.95 m
NC-29 rapid charger FNB12S/14/17 .....64.95 f
NC-42 1-hr quick charger .....90.00 w
SP-6 speaker.....152.95 m
VXR-5000VADC 2m 25W repeater.....1099 m
2M/767 2m module FT-767GX.....224.95 w

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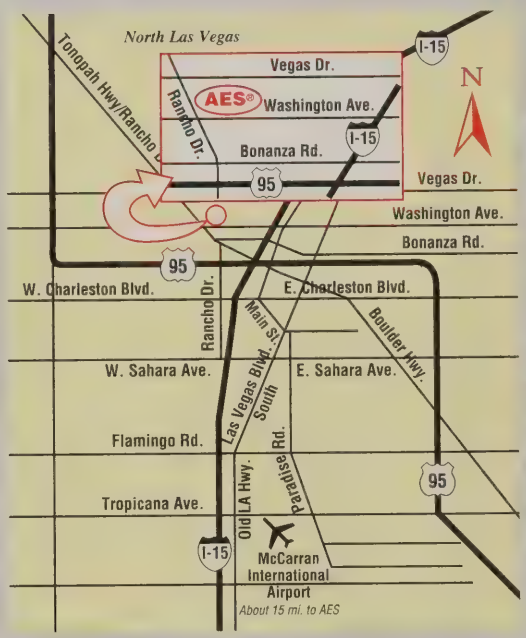
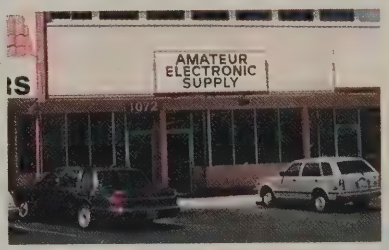
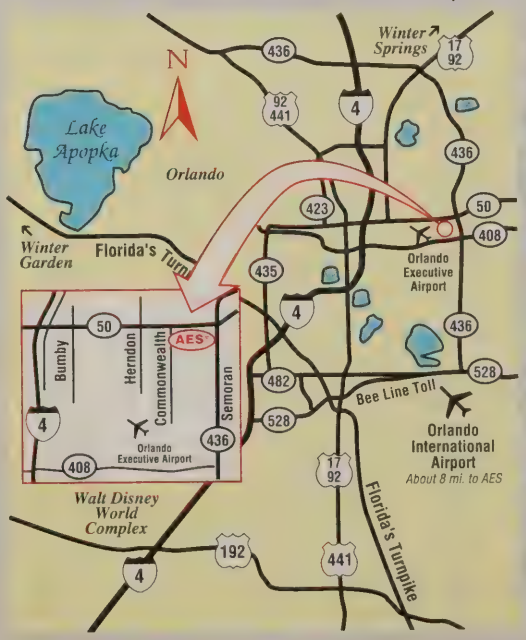
◀ *Milwaukee, Wisconsin – Headquarters*



Wickliffe, Ohio ▶

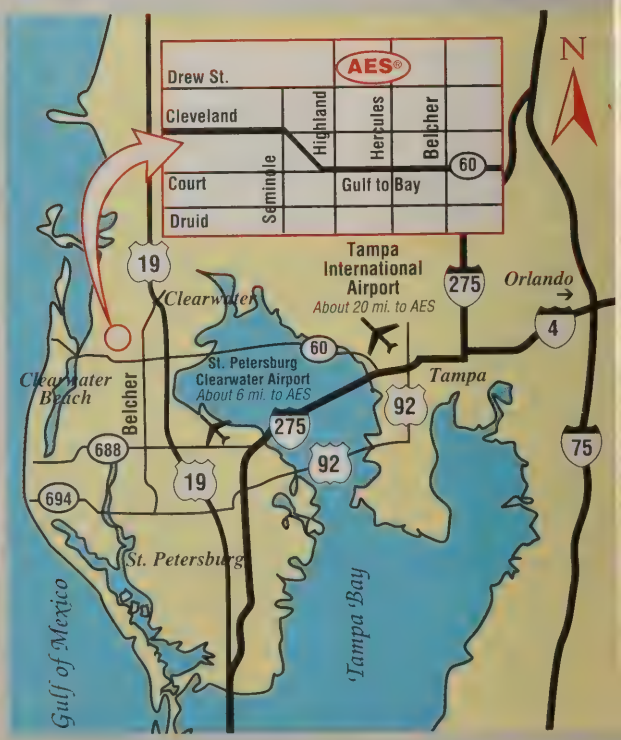


◀ *Las Vegas, Nevada*



◀ *Orlando, Florida*

Clearwater, Florida ▶



 EXTENDED TELEPHONE HOURS – Monday thru Friday call 1-800-558-0411 as early as 6:00 A.M. Pacific and as late as 8:30 P.M. Eastern time

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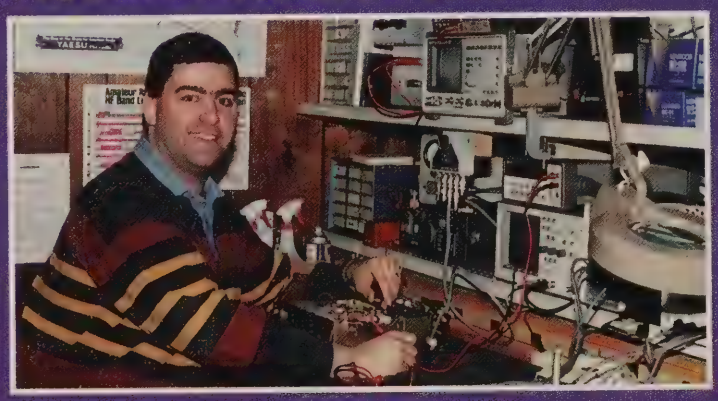
BILL–WB7SAJ

TECHNICIANS: We have 8 full-time and 3 part-time technicians. Three are shown in their shops in Milwaukee. Also pictured are John–WA8PKB in Wickliffe, OH, Gil–K4ISK in Orlando, FL, Ron–KE7LG in Clearwater, FL & Bob–KG7D in Las Vegas, NV.

EXPERIENCE: These technicians are all Factory-Trained on the major brands (ICOM, YAESU, KENWOOD), and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

WE'RE EQUIPPED TO DO THE JOB! Each shop uses a state-of-the-art Hewlett Packard 8920A test set, which replaces several pieces of conventional test equipment. It combines twenty-two different instruments including a spectrum analyzer, tracking generator, digital scope, distortion and SINAD meter, all mode signal generator, frequency counter and more! It's highly stable, very accurate and helps speed repairs because it's I-BASIC computer allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in high-tech soldering stations for work on the latest delicate surface mount technology



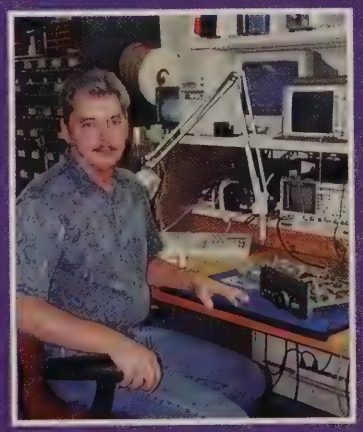
PAUL–N9KEZ

REPAIRS: Whether you purchased from us or not, we can extend our Professional Technical Service to your "out of warranty late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the AES Service Department in Milwaukee at 414-358-0333; ask for Miles.

LABOR RATES: Our rate for Out-of-Warranty Service is $51.00 per hour. Note: There is a $68.00 minimum charge for service on HF/VHF Base Stations, and a $51.00 minimum charge on VHF Mobiles and Handheld transcivers.

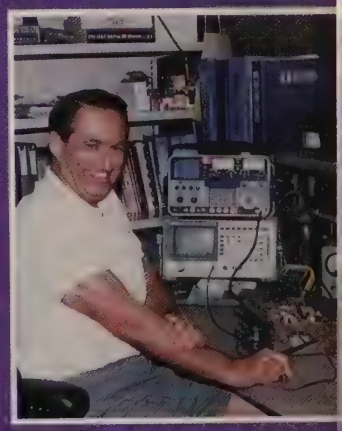
POLICIES AND OTHER INFORMATION: See pgs. 159 and 160 for our Policies, Warranty Information and Telephone Numbers of the Major Manufacturers.

JOHN–WA8PKB



GIL–K4ISK

BOB–KG7D



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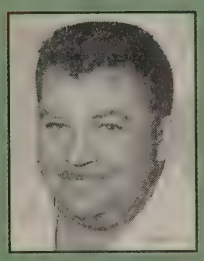


Jaime N4LIO

Carlos

Para Contactar:
Amateur Electronic Supply® 621 Commonwealth Avenue, Orlando, Florida 32803, EUA
Tel. 1-407-894-3238; Toll Free 1-800-327-1917; Fax. 1-407-894-7553; Internacionales 1-407-898-1166

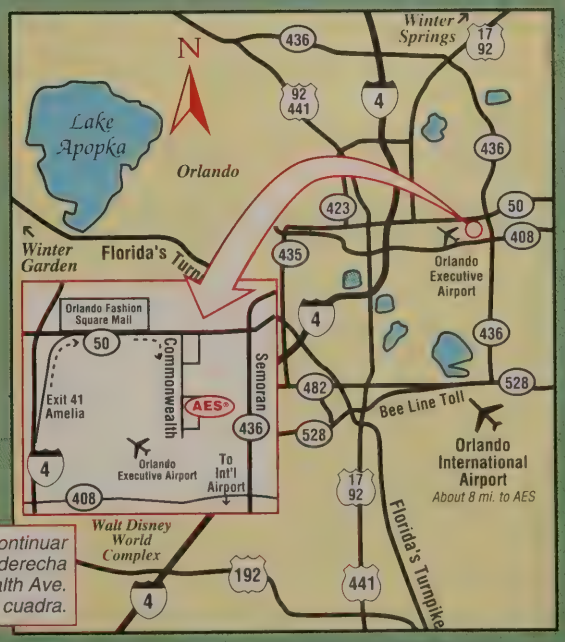
Forma de pago: El pago que se prefiere es por transferencia de fondos. No se aceptan giros bancarios internacionales. Las tarjetas internacionales de crédito se aceptan únicamente en nuestros salones de venta. Nuestra dirección para la transferencia de fondos es: Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193, para crédito a Amateur Electronic Supply – Acct. #1300009536.

Método de envío: El envío se hará de acuerdo con sus instrucciones. Si UD. no las indicia AES hallará el método más adecuado.

Garantía: La fábrica garantiza sus equipos únicamente dentro de los Estados Unidos. Si su equipo necesitara reparación debe devolverlo a AES con una copia de la garantía y de la factura dentro del plazo autorizado por el fabricante. AES se reserva el derecho de reparar o substituir el equipo que no funcione como diseñado por razones que no resultaron por daño durante envio. Al recibir el equipo que no funcione o por defectos debe notificarse a AES antes de los 10 días después de recibido. El equipo debe empacarse en la caja original usando los materiales de empaque originales. **El costo del envío, tanto de ida como de vuelta, es por cuenta del cliente.** Los precios y garantías pueden cambiarse sin previo aviso. Algunos productos no se pueden ser exportados a ciertos países de acuerdo con las legislaciones locales.

Some Helpful Abbreviations
ABREVIACIONES IMPORTANTES

AMP	Amplificador
ANT	Antena
AT	Acoplador automatico de antena
BATT	Batteria
BKT	Braket de montura
BPR	Guarda choque
CGR	Cargador
CIG	Conector cigarillo
CNTR	Contador
DB	Decibeles
DLX	Lujo
DPLX	Duplexador
EL	Elemento
FREQ	Frequencia
GND	Tierra
GTR	Labio de ventana
HT	Radio de mano
HVY	Pesado
KYR	Llave
MA	Miliamperes
MAG	Magnetico
MAINT	Mantemiento
MIC	Microfono
MT	Montura
MTG	Montura
NMO	Montura Motorola
PROG	Programable
PS	Fuente de poder
PWR	Poder
RCVR	Receptor
REM	Remoto
SENS	Sensitividad
SPKR	Bocina
SPLX	Simplex
SYS	Sistema
TTP	Teclado de botones
VOL	Volumen
W/	Con
WPM	Palabras por minuto
XCVR	Transceptor



I-4 este hasta la salida 41 (Amelia) continuar parallelo hasta Colonial Dr. Doblar a la derecha 2.6 millas (4.0 kilo) hasta Commonwealth Ave. doblar a la Derecha 1/2 cuadra.

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◆ AES® Credit Card ◆ Gift Certificates ◆ More!...

SUPER Mail Order Service - *When You Need It... Its' There!*

plus... SAVE MONEY ON YOUR AES® PURCHASES SHIPPED VIA UPS GROUND IN THE LOWER 48 STATES!

AMOUNT OF ORDER	SHIPPING CHARGES
Up to $100.00	$4.50
$100.01 to $500.00	$6.50
$500.01 to $1,499.99	$8.50
$1500.00 and UP	AES® Pays the Shipping!

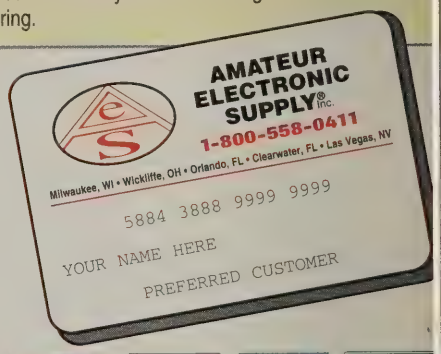
Flat Rate Does Not Apply To Drop Shipments

IMPORTANT INFORMATION

1. Shipping charges are based on amount of the original order. Adding to or deleting from the original order will not affect the shipping charges.
2. The order amount on which charges are determined is pre-coupon & pre-tax.
3. 2nd & 3rd shipments (back-orders) are shipped **PREPAID** at **AES®** expense (UPS ground only).
4. COD fees not included. Add $6.50 per carton.
5. Shipping charge includes adequate insurance.
6. Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.
7. Check with sales person when ordering.

The AES® Credit Card - *Buy Now • Enjoy Now!*

- Good at All **AES®** Stores in-person or on telephone orders
- Use for anything in our Catalog – No minimum amount
- No down payment required ◆ No payment for 90 Days (Interest Accrues)
- Low monthly payments ◆ No annual fees
- Quick approval to qualifiers ◆ Finance up to $5,000 ... or more!
- Be an **AES®** Preferred Customer ◆ Leaves other major Credit Card lines open
- Buy the gear you want NOW... why wait?
- Get approved now ... have your **AES®** Card ready when you need it!



For your convenience AES® also accepts the Major Credit Cards!

Gift Certificates - *Let 'em Choose Exactly What They Want!*

AMATEUR ELECTRONIC SUPPLY
5710 W. GOOD HOPE ROAD.
MILWAUKEE, WISCONSIN 53223
(414) 358-0333

NO. 0000

DATE _____ 19____

THIS CERTIFICATE ENTITLES _____

TO MERCHANDISE VALUED AT _____ DOLLARS $_____

PRESENTED BY _____

_____ AUTHORIZED SIGNATURE

Can't decide what to give that favorite Ham Operator on a Birthday, Anniversary, Holiday, or Special Day?

AES® has Gift Certificates and a huge selection of over 6,000 products to choose from. Gift Certificates may be purchased at our Milwaukee store by simply calling:

1-800-558-0411

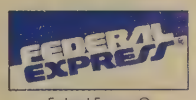
What could be Easier or More Appropriate? Call AES® Today!

 EXTENDED TELEPHONE HOURS – Monday thru Friday call 1-800-558-0411 as early as 6:00 A.M. Pacific and as late as 8:30 P.M. Eastern time

AMATEUR ELECTRONIC SUPPLY®

ORDER BLANK

5710 W. Good Hope Road • Milwaukee, Wisconsin 53223
Phone: (414) 358-0333 • Toll Free: 1-800-558-0411
***You may FAX this order to:* (414) 358-3337**



Federal Express® Delivery Service Available

SHIPPING METHODS Unless otherwise specified, orders are shipped via **UPS Ground** at the FLAT-RATE shown at the bottom. Shipments to APO/FPO & Puerto Rico are via Priority Mail. *For Faster Service* – select one of these express methods: ❒ **UPS Next Day Air** ❒ **2nd Day Air** ❒ **3-Day Select** ❒ **Federal Express** ❒ **Express Mail.** These alternate methods are not flat-rated so allow for additional shipping charges. Orders exceeding UPS or USPS weight, size or value limits will be shipped via Truck or Air Freight collect *Shipping charges taxable in WI, FL & NV.

TRADE-INS: Use a sturdy carton and plenty of packing material for protection. Ship PREPAID and FULLY INSURED. Do not use Bus or Parcel Post. Collect shipments will not be accepted. AES® assumes no responsibility for damage in transit or for filing damage claims. Canadians, inquire locally about taxes and/or customs charges before releasing your shipment.

ACCOUNT NO. _____ Date _____

Name _____ Call _____

Address _____

City/State _____ Zip _____

You may telephone me at *(Be sure to include area code)*:

Home # _____ Hours: _____

Work # _____ Hours: _____

SHIP TO *(If other than at left)*:

_____

_____

_____

IF YOU HAVE MOVED since your last order, please show your old address:

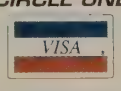
_____

_____

QTY.	DO NOT USE	MANUFACTURER • PART OR MODEL # • DESCRIPTION	PRICE EACH	TOTAL

FINAL BALANCE DUE (LINE 10) TO BE PAID BY:

CIRCLE ONE



Account Number

Cardholder's Name **Card Expires**

Cardholder's Signature **Date**

LINE 1 — Total Amount of Order	$
LINE 2 — Subtract TRADE-IN Allowance (if any) ..... Enclose mail quotation or reference telephone quote & list Trade-in items. **IMPORTANT!** Persons having a Trade-in must check one of the choices in the box at the lower left of this Order Blank.	–
LINE 3 — Shipping Charges (see METHODS, and below) ..... *Shipping Charges are taxable in Wisconsin, Florida & Nevada*	+
LINE 4—Sales Tax: ❑ WI-5.5%, ❑ FL-6%, ❑ NV-7%, ❑ OH-5.75% . *For Ohio & Nevada figure tax from LINE 1 (before trade-in allowance)*	+
LINE 5— Subtract here: AES Refund Checks, Gift Certificates or Manufacturer's Coupons (if any)	-
LINE 6 — **Balance**	$
LINE 7 — Due AES from previous order (if any)	+
LINE 8 — Total Amount Due	$
LINE 9 — Amount Enclosed	–
LINE 10 — Final Balance Due (if any)	$

❑ **CHECK OR MONEY ORDER** • For your own protection **DO NOT MAIL CURRENCY...** send a Bank Check or Money Order. A Personal Check may delay shipping until it clears our bank. Please attach your remittance firmly to top of this order blank.

❑ **COD • (UPS Ground, only)** The total cost of Merchandise, Shipping Charges and $6.50 COD Fee will be collected in Cash or Certified Check upon delivery.

MINIMUM $20.00 COD ORDER – NO AIR OR PARCEL POST COD's!

IF YOU HAVE A TRADE-IN — CHECK ONE OF THE FOLLOWING:

❑ Hold this order until you receive and approve my Trade-in.

❑ Payment-in-full enclosed. Refund the allowance after my Trade-in is received and approved.

❑ Charge the **FULL AMOUNT** of my order to my Charge Card. Credit my trade-in allowance when my Trade-in is received and approved.

UPS Ground flat-rate Shipping: Orders up to $100.00 ($4.50); $100.01 to $500.00 ($6.50) $500.01 to $1499.99 ($8.50). Orders $1500.00 & Up **AES®** pays shipping (except COD fee). Flat rate not applicable to Drop Shipments.

CREDIT CARD APPLICATION

CREDIT CARD APPLICATION-PRIMARY APPLICANT

126-CATALOG (10-95)

First Name: _____ M.I.: _____ Last: _____

Date of Birth: _____ Soc. Sec. No.: ___ — ___ — ___ # Dep. (not including yourself) _____

Mailing Address: _____ City _____ State _____ Zip _____

Physical Address (if different than above): _____ City _____ State _____ Zip _____

Home Phone: ( ) _____ Work Phone: ( ) _____

Time at Residence: ____ Yrs. ____ Mos. ☐ Own ☐ Rent ☐ Other _____ Monthly Payment $ _____

Previous Address (NO. & Street): _____ Apt/RR: _____

City: _____ State: _____ Zip: _____ Time at Prev. Res.: ____ Yrs. ____ Mos.

Employer: _____ City: _____ State: _____

Net Monthly Income: _____ Time at Employment: ____ Yrs. ____ Mos. Position: _____ Prev. Employer: _____ Prev. Employment: ____ Yrs. ____ Mos.

Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net $ _____ Source: _____

PLEASE CHECK ONE OF THE FOLLOWING BOXES: ☐ Checking ☐ Savings ☐ Both ☐ None

CREDIT CARD APPLICATION-CO-APPLICANT

First Name: _____ M.I.: _____ Last: _____

Mailing Address: _____ City _____ State _____ Zip _____

Physical Address (if different than above): _____ City _____ State _____ Zip _____

Home Phone: ( ) _____ Work Phone: ( ) _____

Date of Birth: _____ Soc. Sec. No.: ___ — ___ — ___ Net Monthly Income $: _____

Employer: _____ City: _____ State: _____ Time at Employment: ____ Yrs. ____ Months

Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net $ _____ Source: _____

CREDIT CARD TERMS (Do not sign without reading)

ANNUAL PERCENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEE	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	$10.00	$10.00	$10.00	Average Daily Balance Method Including New Purchases	None

BY SIGNING BELOW YOU ACKNOWLEDGE, CERTIFY AND AGREE THAT:

(1) you are applying for an open-end credit card account with **AMERICAN GENERAL FINANCIAL CENTER, MIDVALE, UTAH** or for other credit available from its affiliate and **AMERICAN GENERAL FINANCIAL CENTER** may share with its affiliates, any information on this application, and any transactions and experiences between applicant(s) and **AMERICAN GENERAL FINANCIAL CENTER**;

(2) such account is revolving, does NOT have a fixed term and the monthly credit card payments are as set forth in paragraph 21 of the Credit Card Cardholder Agreement which has been given to you;

(3) we may obtain a credit report on you;

(4) if this application is accepted and credit is extended by **AMERICAN GENERAL FINANCIAL CENTER**, you will be bound by the terms of the Credit Card Cardholder Agreement attached hereto, a copy of which has been provided to you to keep;

(5) if your application for a credit card is not approved, your application may be given to our affiliate to review and an offer for a retail installment contract or an installment loan (the terms of which may differ) may be made to you. You are in no way obligated to accept an offer from our affiliate;

(6) **AMERICAN GENERAL FINANCIAL CENTER** may share with its affiliates any information on this application, and any transactions and experiences between applicant(s) and **AMERICAN GENERAL FINANCIAL CENTER**;

(7) the statements above are true and we may rely on them; and

(8) YOU HAVE READ AND UNDERSTAND THE CREDIT CARD TERMS AND THE ATTACHED CREDIT CARD CARDHOLDER AGREEMENT.

PLEASE SIGN _____ PRIMARY APPLICANT SIGNATURE DATE

PLEASE SIGN _____ CO-APPLICANT SIGNATURE DATE

INSURANCE ELECTION OPTION: Please enroll me in the ChargeGard Plan which protects my credit card account as disclosed. Full details of coverages, exclusions and limitations are contained in the Certificates of Insurance which I understand will be mailed to me. I understand and agree that premiums will be charged to my credit card account as long as my account is in good standing. I understand that if my account is cancelled, my ChargeGard Insurance is also cancelled. I may cancel at any time. I understand that enrollment in the Insurance plan is optional and is not required to obtain/maintain credit.

☐ YES, I want ChargeGard Insurance coverage (subject to state availability)

☐ NO, I do not want ChargeGard Insurance.

NY RESIDENTS: No coverage is available in NY.

*Unemployment and disability coverages are available only to the Primary Cardholder.

PLEASE SIGN _____ PRIMARY APPLICANT SIGNATURE (person to be insured) DATE

(MERCHANT USE ONLY)

Initial Purchase: $ _____ Down Payment: $ _____ Salespersons Name: _____

Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____

Co-Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____

Account Number: _____ Credit Line $ _____

Merchant Name/Number: _____ Dealer Name/Number: _____

Please mail this original, signed application to: Amateur Electronic Supply • 5710 W. Good Hope Rd. • Milwaukee, WI 53223 A photocopy or fax cannot be accepted

YOUR BILLING RIGHTS - KEEP THIS NOTICE FOR FUTURE USE

This notice contains important information about your rights and responsibilities under the Fair Credit Billing Act.

NOTIFY US IN CASE OF ERROR OR QUESTIONS ABOUT YOUR BILL.

If you think your bill is wrong, or if you need more information about a transaction on your bill, write to us on a separate sheet at American General Financial Center, P.O. Box 3212, Evansville, Indiana 47731-3212. Write to us as soon as possible. We must hear from you no later than 60 days after we sent you the first bill on which the error or problem appeared. You can telephone us, but doing so will not preserve your rights. In your letter, give us the following information:

- Your name and account number.
- The dollar amount of the suspected error.
- A description of the error and explain, if you can, why you believe there is an error. If you need more information, describe the item you are not sure about.

YOUR RIGHTS AND OUR RESPONSIBILITIES AFTER WE RECEIVE YOUR WRITTEN NOTICE

We must acknowledge your letter within thirty (30) days, unless we have corrected the error by then. Within ninety (90) days, we must either correct the error or explain why we believe the bill was correct.

After we receive your letter, we cannot try to collect any amount you question, or report you as delinquent. We can continue to bill you for the amount you question, including finance charges, and we can apply any unpaid amount against your Credit Limit. You do not have to pay any questioned amount while we are investigating, but you are still obligated to pay the parts of your bill that are not in question. If we find that we made a mistake on your bill, you will not have to pay any Finance Charges related to any questioned amount. If we didn't make a mistake, you may have to pay Finance Charges, and you will have to make up any missed payments on the questioned amount. In either case, we will send you a Statement of the amount you owe and the date that it is due.

If you fail to pay the amount that we think you owe, we may report you as delinquent. However, if our explanation does not satisfy you and you write to us within ten (10) days telling us that you still refuse to pay, we must tell anyone we report you to that you have a question about your bill. We must tell you the name of anyone we report you to. We must tell anyone we report you to that the matter has been settled between us when it finally is.

If we don't follow these rules, we can't collect the first $50 of the questioned amount, even if your bill was correct.

SPECIAL RULES FOR CREDIT CARD PURCHASES

If you have a problem with the quality of property or services that you purchased with a credit card, and you have tried in good faith to correct the problem with the Merchant, you may have the right not to pay the remaining amount due on the property or services. There are two limitations on this right:

(1) You must have made the purchase in your home state or, if not within your home state, within 100 miles of your current mailing address; and

(2) The purchase price must have been more than $50.

These limitations do not apply if we own or operate the merchant, or if we mailed you the advertisement for the property or services.

CARDHOLDER NOTICES

NOTICE FOR OHIO RESIDENTS: The Ohio laws against discrimination require that all creditors make credit equally available to all credit worthy customers and that credit reporting agencies maintain separate credit histories on each individual upon request. The Ohio Civil Rights Commission administers compliance with the law.

NOTICE FOR NEW YORK RESIDENTS: A consumer credit report may be requested in connection with the application or in connection with updates, renewals or extensions of any credit granted as a result of this application. If you subsequently ask for this information, you will be informed whether or not such a report was requested and if so, the name and address of the agency that furnished the report.

NOTICE FOR MARRIED WISCONSIN RESIDENTS: No provision of a marital property agreement, a unilateral statement under a §766.59 or a court decree under §766.70 adversely affects the interest of the creditor unless the creditor, prior to the time the credit is granted, is furnished a copy of the agreement, statement or decree or has actual knowledge of the adverse provision when the obligation to the creditor is incurred.

NOTICE FOR CALIFORNIA RESIDENTS: Married persons may apply for a separate account. After credit approval, each applicant shall have the right to use this account to the extent of any credit limit set by the creditor and each applicant may be liable for all amounts of credit extended under this account to any joint applicant.

NOTICE FOR MAINE RESIDENTS: A consumer report may be requested in connection with this application and you may, upon request, be informed whether or not a consumer report was requested, and if a report was requested, informed of the name and address of the consumer reporting agency that furnished the report.

All information is current as of 10/95.
To find out about changes in the information in this Application/ Cardholder Agreement, call us at (800) 453-2017 or, write to American General Financial Center, Service Center, P.O. Box 3212, Evansville, IN 47731-3212

CREDIT CARD CARDHOLDER AGREEMENT WITH AMERICAN GENERAL FINANCIAL CENTER

1. **APPLICATION TO AMERICAN GENERAL FINANCIAL CENTER:** Each person executing the Application for a credit card cardholder account applies to American General Financial Center (AGFC) for the establishment of an open end credit account. If AGFC accepts the application, credit will be extended for (1) the purchase of goods and/or services from businesses that honor the Credit Card Account and (2) the purchase of financial products or services that AGFC may offer from time to time. Each person executing this Agreement agrees to live up to the terms of this Agreement.

2. **DEFINITIONS**: In this Agreement "We", "Our", and "Us" means American General Financial Center or AGFC. "You" and "Your" means each person who signs the application and Cardholder Agreement. "Credit Card" means the Credit Card issued to you by us under this Agreement. This Account and all purchases made on it are not binding on us until your credit is approved. The application will be deemed approved and the Account established when we (or the merchant) give you notice of that fact. You will be deemed to have accepted the credit card Account and agreed to be bound by the terms of this Agreement by your use of the Account evidenced by a purchase slip.

3. **OWNERSHIP**: The Credit Card remains our property and may be cancelled by us at any time without notice. You, and all authorized users, agree to maintain good credit with all creditors. You, and all authorized users, agree to surrender the Card and any other access devices and to discontinue utilization of the Credit Card Account by any other means immediately upon request.

4. **CREDIT LIMIT**: We will tell you what your Credit Limit is on your Account. You agree not to allow the outstanding balance of your Account to exceed your Credit Limit. We do not have to honor any use of your Account which would cause you to exceed your Credit Limit. If you exceed your Credit Limit we may honor that use of your Account without giving up our rights, and it does not mean that we have to honor other uses which would cause your Credit Limit to be exceeded. We may increase or decrease your Credit Limit at any time.

5. **YOUR RESPONSIBILITIES UNDER THE AGREEMENT:** You agree as follows:

   A. To repay us for all purchases made under the Account, plus Finance Charges and any other charges due under the Account, as described in this Agreement, in accordance with the monthly billing statements we will send you.

   B. That you are responsible for purchases made by any person you allow to use your Card or Account.

   C. Not to allow the outstanding balance to exceed your Credit Limit, but if you do you agree to repay us such excess amount within 10 days after our request. Exceeding the Credit Limit will result in our charging your Account an over-the-credit-limit fee.

   D. Not to allow the Account or Card to be used by anyone other than yourself and authorized users.

   E. To give us credit information as we may request from time to time.

   F. To notify us of a change in your name and address.

   G. To live up to all other provisions of this Agreement.

6. **YOU MAY NOT COMPROMISE A DISPUTE BY NOTATION ON A NEGOTIABLE INSTRUMENT:** No dispute in the amount owed under this Agreement may be settled or compromised by a notation or statement on the back or front of any negotiable instrument intended for payment of the debt or by any document whether or not accompanied by a negotiable instrument which document purports to compromise or settle the debt or have us acknowledge the debt as paid in full by the act of negotiating a negotiable instrument. All such documents or negotiable instruments must be sent to the address for billing errors contained in this Agreement. Any actions arising under this section shall be determined in accordance with Utah law.

7. **RETURNED CHECK FEE**: We may assess, and if assessed, you will pay a returned check fee of $10.00 for any check or other form of negotiable instrument offered in payment on your Account which is presented for payment and which is subsequently not paid.

8. **OVER-THE-CREDIT-LIMIT FEE**: You agree not to exceed the credit limit shown on your monthly billing statement. If you exceed your credit limit, you will be in default, and such default will result in our charging your Account an over-the-credit-limit fee of $10.00 and may result in cancellation of your Account. You agree to repay us the excess amount within 10 days of our request. We may refuse to honor any transaction which would cause you to exceed your credit limit.

9. **LATE PAYMENT FEE:** We may assess, and if assessed, you will pay a $10.00 late payment fee when you fail to make at least the minimum monthly payment within 10 days of the Payment Due Date. Payments are not considered made until date of receipt.

10. **COLLECTION COSTS:** To the extent permitted by law, if we must refer the collection of your Account to an attorney not a salaried employee of ours, you promise to pay us a reasonable attorney's fee and all court and collection costs actually incurred by us in connection with any collection proceeding as may be allowed by law.

11. **CANCELLATION**: We own the Credit Card. You may not assign the Account. On request you must surrender the Credit Card to us or any authorized institution or merchant. We may cancel this Agreement at any time, subject to applicable law. You may cancel this Agreement by sending us a written request for Account cancellation with all your Cards and other means of Account access cut in half. Cancellation will not affect the existing obligations.

12. **DEFAULTS AND ACCELERATION**: All amounts you owe under this Agreement may at our option and without further notice become immediately due and payable if you default under this Agreement. You will be in default under this Agreement if you fail to pay any required amount on time, make any false or misleading statements to AGFC, or otherwise fail to comply with this Agreement. We may cancel your Account and require payment of the full amount you owe us if you die, become bankrupt or insolvent, or if we deem ourself insecure, believing in good faith the prospect of payment thereunder to be impaired.

13. **CHANGES TO THIS AGREEMENT**: We may change the terms of this Agreement from time to time and shall give you notice of the changes as required by law. Such changes may include, without limitation, changes in the monthly periodic rate (and the corresponding Annual Percentage rate) and changes in the method of computing Finance Charges. If we do so, such changes will apply to both the outstanding balance in your Account and future transactions.

14. **LOST OR STOLEN CARD:** You may be liable for unauthorized use of your Card. You will not be liable for unauthorized use that occurs after you notify American General Financial Center, Service Center, P.O. Box 3053, Evansville, Indiana 47730-3053, 1-800-628-9324, orally or in writing, of loss, theft, or possible unauthorized use of your Card or Account. In any case, your liability shall not exceed the lesser of $50 or the amount of the unauthorized use.

15. **DELAY IN TAKING ACTION:** We will not lose any of our rights under this Agreement if we delay taking action for any reason. To the extent allowed by law, we may take other action not listed in this Agreement. If we take other action, we will not lose our rights under this Agreement.

16. **CREDIT INFORMATION:** As required by law, you are hereby notified that if you fail to fulfill the terms of your credit obligations a negative credit report reflecting on your credit record may be submitted to a credit reporting agency. You agree that we may request a consumer credit report on you and may use it in connection with any application for establishment of this Account. You also agree that we may provide information about your account, consumer report information and other information we may have about you to affiliates of ours for possible marketing to you of financial services provided by our affiliates.

17. **APPLICABLE LAW**: This Agreement shall be governed by and interpreted entirely in accordance with the laws of the State of Utah, or, to the extent such laws are superseded by federal law, federal law shall apply. AGFC will process your application, make the decision to approve and open your Account and advance credit for you from our Midvale, Utah office. You agree that all terms, charges, fees and conditions are material to the determination of the Finance Charges, Annual Percentage Rate, and Monthly Periodic Rate.

18. **APPLICATION OF PAYMENTS**:

   A. Payments are allocated between Special Payment Plan Purchases and purchases not made under any Special Payment Plan (here-in Regular Revolving Purchases) in the following priority:

      1. Delinquent Special Payment Plan Purchase balances.
      2. Delinquent Regular Revolving Purchase balances.
      3. Special Payment Plan Purchases minimum payment due.
      4. Regular Revolving Purchases minimum payment due.

      Payments in excess of the minimum payment due and delinquent amounts will be applied first to the Regular Revolving Purchases balances and then to the Special Payment Plan Purchases balances.

      Please follow the instructions on your billing statement if you have more than one purchase and wish to apply your payment to a specific purchase.

   B. For that portion of the payment allocated to the Regular Revolving Purchases side of the Account, the payment will apply:

      1. First to the sum of fees and accrued Finance Charges;
      2. then to the previous billed purchases;
      3. then to new purchases.

   C. For that portion of the payment allocated to the Special Payment Plan Purchases side of the Account, the payment will apply first to the delinquent amount of the oldest Special Payment Plan Purchase on the Account, reducing first the interest and then the principal. When the payment clears the delinquent amount of the oldest delinquent Special Payment Plan Purchase, the payment applies to the next oldest delinquent Special Payment Plan Purchase on the Account. When the payment clears all delinquent amounts for Special Payment Plan Purchases, the payment applies to the interest and principal. Interest and/or principal is reduced on Special Payment Plan Purchases in the same sequence as the purchases occurred.

19. **FINANCE CHARGES**: Finance Charges begin on the post date of the transaction. You will avoid Finance Charges on Purchases if you paid the entire New Balance shown on your previous billing statement by the Payment Due Date. If the new balance is not paid in full by the Payment Due Date, Finance Charges will begin to accrue on the Average Daily Balance of Purchases (defined below). This includes previously billed and unpaid Purchases and new Purchases, whether or not billed on your periodic statement, from the post date of the transaction. The **Finance Charge** on your Account is figured by applying the **Monthly Periodic Rate** of 1.575%, which is an **Annual Percentage Rate** of 18.9% to the Average Daily Balance. To get the Average Daily Balance on which Finance Charges are computed, we add the total daily balance of purchases (both previously billed and unpaid purchases and new purchases whether or not billed on your periodic billing statement yet) plus any unpaid balance of purchases under a Special Payment Plan which first became subject to Finance Charges on such day and we deduct any payments or credits. The sum is divided by the number of days in the statement period. (Special Payment Plan purchases which have not become subject to Finance Charges are not included in the Average Daily Balance.)

20. **SPECIAL PAYMENT PLAN PURCHASES:** In addition to Regular Revolving Purchases that earn Finance Charges as stated above, you may from time to time be permitted to make purchases with the following Special Payment Plans which will be specified on your purchase slip:

   A. Deferred Payment Purchases - No payment will be due on the Deferred Payment Purchase for the period specified on the purchase slip; however, Finance Charges will accrue on the date the Deferred Payment Purchase posts to the Account. The Deferred Payment Purchase will not defer the payment due date for other purchases made on your Account.

   B. Deferred Finance Charge Purchases - No Finance Charges will accrue on the purchase for the period specified on the purchase slip; however, regular payments must be made. Finance Charges will not be deferred for other purchases made on your Account.

   C. Deferred Payment and Deferred Finance Charges - No payments are due and Finance Charges will not accrue on the purchase for the period specified on the purchase slip. Finance Charges will accrue and payment must be made for other purchases made on your Account.

   D. Same as Cash - If during the time period (the option period) specified on the front of your purchase slip you pay off the balance of the purchase, no Finance Charges will be assessed on the purchase. However, if the balance of the purchase is not paid during this time period, Finance Charges will be assessed from the post date of transaction. Minimum Payments may be required during the option period as specified on the front of your purchase slip and in this Cardholder Agreement.

   E. Reduced Annual Percentage Rate - Finance Charges will be calculated at a lower annual Percentage Rate than disclosed in the Finance Charges paragraph of the Agreement. The lower Annual Percentage Rate applicable to such special purchases will be disclosed on the purchase slip and on your monthly periodic statement.

21. **BILLING STATEMENT/MINIMUM PAYMENT:** If your Account has a balance, we will send you a Billing Statement (Statement) periodically. You must pay at least the Minimum Payment given on the Statement by the Payment Due date. The Minimum Payment will be the greater of 3% of the Total New Balance plus the monthly payment amount due on special Payment Plan purchases or $10.00. A total New Balance of less than $10.00 is payable in full.

   You have the right to pay all or part of the balance due under the Account at any time without a prepayment penalty. Payment made in an amount greater than the Minimum Payment does not relieve you of your obligation to pay the next Minimum Payment when it comes due. We will not refund to you a credit balance of $1.00 or less.

   We can accept late payments, partial payments, checks and money, without losing any of our rights under this Agreement. We can also delay in enforcing our rights under this Agreement any number of times without losing them. Also, we may, to the extent permitted by law, take other action not listed in this Agreement.

22. **PLACE TO SEND PAYMENTS**: Payments you make on the Account are to be mailed to the address we set forth on the Monthly Billing Statement.

23. **SECURITY INTEREST**: (Except in New York)

   We will have a purchase money security interest in all goods purchased on your Account until the goods are paid for in full. If you do not make your minimum payments, we may take possession of only the goods that have not been paid for in full. We may require you to make the goods available at a convenient place of our choice. We waive any security interest in your home if the goods are installed therein.

24. **ADDRESS**: You may write us at American General Financial Center, Service Center, Post Office Box 3212, Evansville, IN 47731-3212.

25. **OTHER PROVISIONS**:
   (a) We shall have no liability to you should any person refuse to honor your Card or Account, (b) you may not assign your rights under the Account, (c) we may assign our rights without obtaining your consent, (d) any notice given by or to any person executing the Application, or action taken or agreement made by any such person, shall bind all such persons.

26. **EXECUTION OF AGREEMENT:** Your signing the Application also binds you to the terms of this Agreement if we accept your application and extend your credit. You will be given a copy of this Agreement.

★ New York residents may contact the New York State Banking Department to obtain a comparative listing of credit card rates, fees and grace periods. New York State Banking Department 1-800-518-8866.

ANNUAL PERCENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEE	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	$10.00	$10.00	$10.00	Average Daily Balance Method Including New Purchases	None

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Manufacturer Phone Numbers & Warranty Information

AEA
2006 196th St. SW Units O & P
Lynnwood, WA 98036
Service/Tech Suppport: 206-775-7373
Sales: 206-774-5554
Upgrade Hot Line: 206-774-1722
Literature Request Line: 800-432-8873
FAX: 206-775-2340
Limited Warranty: 1 year

ALINCO
438 Amapola Avenue, #130
Torrance, CA 90501
Customer Service: 310-618-8616
FAX: 310-618-8758
Limited Warranty: 1 year parts and labor. Within 15 days of purchase, extended 1 year parts and labor warranty availble from **ALINCO**.

AMERITRON
P.O, Box 494 • Mississippi State, MS 39762
Shipping: 116 Willow Rd. Starkville, MS 39759
Customer Service: 601-323-8211
FAX: 601-323-6551
Limited Warranty: 1 year on all products except 2 years on AL-80B. All tubes are guaranteed by the respective tube manufacturers.

AZDEN
147 New Hyde Park Road
Franklin Square, Ny 11010
Information & Service 516-328-7501
FAX: 516-328-7506
Warranty: 2 years: 1st year parts & labor; 2nd year, parts only.

COMET (NCG)
1275 N. Grove St • Anaheim CA 92806
Customer Service: 800-962-2611
FAX: 714-630-7024
Limited Warranty: 90 days

CUSHCRAFT Corporation
P.O Box 4680 • Manchester, NH 03108
Telephone: 603-627-7877
FAX: 603-627-1764
Limited Warranty: 1 year against material defects and workmanship.

GLEN MARTIN ENGINEERING
Rt 3 Box 322 • Boonville, MO 65233
Information: 816-882-2734
Limited Warranty: repair/replace within 90 days from purchase

HUSTLER
One Newtronics Place
Mineral Wells, TX 76067
Customer Service: 817-325-1386
FAX: 817-328-1409
Limited Warranty: 1 year against material defects and workmanship.

ICOM AMERICA, Inc.
380 116th Avenue NE • Bellevue, WA 98004
Telephone: 206-454-8155
Customer Service Hotline: 206-454-7619
Parts Department: 206-454-8155
FAX: 206-454-1509
BROCHURE: 206-450-6088

See Page 153 for information about the AES® Service Department

ICOM Regional Customer Service Centers
18102 Sky Park South., Suite 52-B
Irvine, CA 92714
Telephone: 714-852-8026
FAX: 714-852-8716
3071 #5 Road, Unit 9
Richmond, British Columbia
Canada V6X 2T4
Telephone: 604-273-7400
Limited Warranty: 1 year parts/labor

KANTRONICS
1202 E. 23rd St. • Lawrence, KS 66046
Product Information: 913-842-7745
Service/Tech Suppport: 913-842-4476
Hours: 9 A.M. – noon & 2 PM – 5 P.M.
24 hour BBS support: 913-842-4678
(1200-14,400 v.32 bis 8 bits no parity)
FAX: 913-842-2031
Limited Warranty: 1 year, parts/labor.

KENWOOD U.S.A.
P.O. Box 22745 • Long Beach, CA 90810
Telephone: 310-639-5300
Fax: 310-631-3913
Parts: 800-262-1312 • 310-515-0207
Parts Fax: 310-538-4919
Bulletin Board (Free): 310-761-8284

KENWOOD Service Center East
829 Lynnhaven Parkway, suite 130
Virginia Beach, VA 23452
Customer Relations: 804-340-1702
Fax: 804-340-6809
Parts: 800-637-0388 • 516-483-5742
FAX: 516-483-5904
Limited Warranty: 1 year, parts/labor.

LARSEN
3611 N.E. 112th Ave. • Vancouver, WA 98668
Customer Service: 206-944-7551
Full Warranty: 3 years.

KLM
14792 172nd Drive S.E. • Monroe, WA 98272
Telephone: 306-794-2923
FAX: 306-794-0294
Full Warranty: 3 years.

MFJ ENTERPRISES, INC.
P.O. Box 494 • Mississippi State, MS 39762
Shipping: 300 Industrial Park Rd.
Starkville, MS 39579
Telephone: 601-323-5869
Technical Support: 800-647-8324
FAX: 601-323-6551
Warranty: 1 year – "no matter what".

MIRAGE
P.O. Box 494 • Mississippi State, MS 39762
Shipping: 116 Willow Road
Starkville, MS 39759
Telephone: 601-323-8287
FAX: 601-323-6551

RF CONCEPTS
1202 E. 23rd St. • Lawrence, KS 66046
Product Information: 913-842-7745
Service/Tech Suppport: 913-842-4476
Hours: 9 A.M. – noon & 2 PM – 5 P.M.
24 hour BBS support: 913-842-4678
(1200-14,400 v.32 bis 8 bits no parity)
FAX: 913-842-2031
Limited Warranty: 1 year, parts/labor.

STANDARD Amateur Radio, Inc.
P.O. Box 60714 • Niles, Il 60714
Telephone: 312-763-0081
Service/Tech Suppport: 913-842-4476
FAX: 312-763-3377
Limited Warranty: 1 year, parts/labor.

STARTEK
398 NE 38th St. • Fort Lauderdale, FL 33334
Telephone: 305-561-2211
FAX: 305-561-9133
Limited Warranty: 5 years, 1 yr. parts/labor.

TELEX-HYGAIN
8601 E. Cornhusker Hwy.
Lincoln, NE 68505-5579
Service & Parts: 402-465-7021
FAX: 402-467-3279
Warranty: Too Many To Print

TIMEWAVE
2401 Pilot Knob Rd. #134
St. Paul, MN 55120
Customer Service: 612-452-5939
FAX: 612-452-4571

UNIVERSAL MFG
43900 Groesbeck Hwy
Clinton Twp, MI 48036
Customer Service: 810-463-2560
Contact Person: Bill Kedzierski,
Dave Kosowski

UNIDEN AMERICA CORP.
8707 N By Northeast Blvd.
Indianapolis, IN 46250
Customer Svc & Parts: 800-772-7497
Limited Warranty: 1 year Scanners,

US TOWERS
1220 Marcin St. • Visalia, CA 93291
Customer Service: 209-733-2438
FAX: 209-733-7194
Full Warranty: 3 years.

YAESU U.S.A.
17210 Edwards Road • Cerritos, CA 90703
Telephone: 310-404-2700
Sales FAX: 310-404-1210
Tech Support FAX: 310-404-4828
Limited Warranty: 1 year, parts/labor.

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- **NEW EQUIPMENT** AES sells only factory sealed items as new. On occasion we may have "Demo" gear available at reduced prices; call for availability.
- **AES CREDIT CARD** Can be used at any AES® location for new or used gear. No payment for 90 days (Interest accrues).
- **PRICING** Due to market fluctuations or Special Purchases, we will pass on decreases in pricing to our customers whenever possible. Sometimes there are increases, so be sure to confirm pricing with your salesperson when ordering. All prices and specifications are subject to change without notice, and we are not responsible for typographical errors or omissions.
- **FLAT RATE SHIPPING** AES has simplified shipping calculations on UPS Ground service to the 48 states by utilizing flat rate categories. See details on page 154. Any faster shipping methods must be paid in advance or with credit cards when ordering.
- **UPS COD ORDERS** **($20 minimum)** UPS ground service only. Payment must be made at time of delivery by CASH only. Money orders, personal or certified checks will not be accepted. The COD fee is $6.50 per carton shipped. The maximum amount of currency UPS will accept for a single COD package is $1,000. Multiple package COD shipments to a single consignee cannot exceed $5,000 in currency collection per day. Not more than $9,999.99 can be collected from any single consignee on any day, from all UPS shippers combined.
- **TRADE-INS AND USED GEAR** Trade your late model gear for New Equipment. just call for a quote! Check out our selection of fine used gear... see page 146 .
- **AES SHIPS TO** U.S.A, it's Possessions, APO/FPO, and Canada. **Canadians Note:** Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. AES will not accept any shipments from Canada unless all fees are paid in advance.
- **OTHER EXPORTS** See **Servicos Internationales** page for details.
- **SPECIAL ORDER ITEMS** Items marked "SPECIAL ORDER" must be paid for in advance with check or money order and are non-cancelable.
- **DAMAGED ITEM??** If you receive a shipment and discover damage to it, NOTIFY THE CARRIER IMMEDIATELY. DO NOT return merchandise to us until notified to do so by the carrier. Retain all packaging materials including styrofoam peanuts, inner *and outer cartons*, labeling, etc. for inspection by the carrier– without this, your claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.
- **DEFECTIVE ITEM??** If your NEW radio or accessory fails within 10 days after you receive it, bring it in or send it back via UPS prepaid and insured. Pack well and include original carton with all packing material, the warranty card, and a photocopy of your invoice. If we can't repair the item within a reasonable length of time, we will replace it, or at our option, apply credit toward other merchandise. Not applicable to audio/video tapes, kits, cable, special ordered or drop-shipped items, software, antennas or towers (these items warrantied by manufacturer only). If you have equipment that appears defective, call our Customer Service Department at (414) 358-0333 for immediate attention.
- **RETURNS** In order to maintain lowest possible prices, AES is unable to offer free trial or evaluation. Authorized returns of merchandise for credit (must be like new with all original packing material) will be subject to a minimum 10% restocking fee. Item must be returned to us within 10 days, prepaid, with a copy of your purchase invoice and a note describing the reason for return. No returns on antennas, towers, items drop-shipped from the manufacturer, audio/video tapes, kits, books or computer software.

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WIRE

Transfer Information

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M&I Marshall & Ilsley Bank, Milwaukee, Wisconsin. ABA #075000051. Further credit to M&I Northern Bank to credit account #10-01-6953 in the name of Amateur Electronic Supply.

WICKLIFFE

Society National Bank, Wickliffe Branch, 29310 Euclid Avenue; Wickliffe, Ohio 44092. Routing #041001039 for credit to: Amateur Electronic Supply - Acct #30-005-7505

ORLANDO

Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193 for credit to: Amateur Electronic Supply - Acct #1300009536

LAS VEGAS

Bank of America, Decatur Meadows Branch. Routing #1224 000 724 for credit to Amateur Electronic Supply - Acct #230056248

BBS & INTERNET

BBS 414-358-3472
E-MAIL aesham@execpc.com
WWW http://www.execpc.com/~aesham

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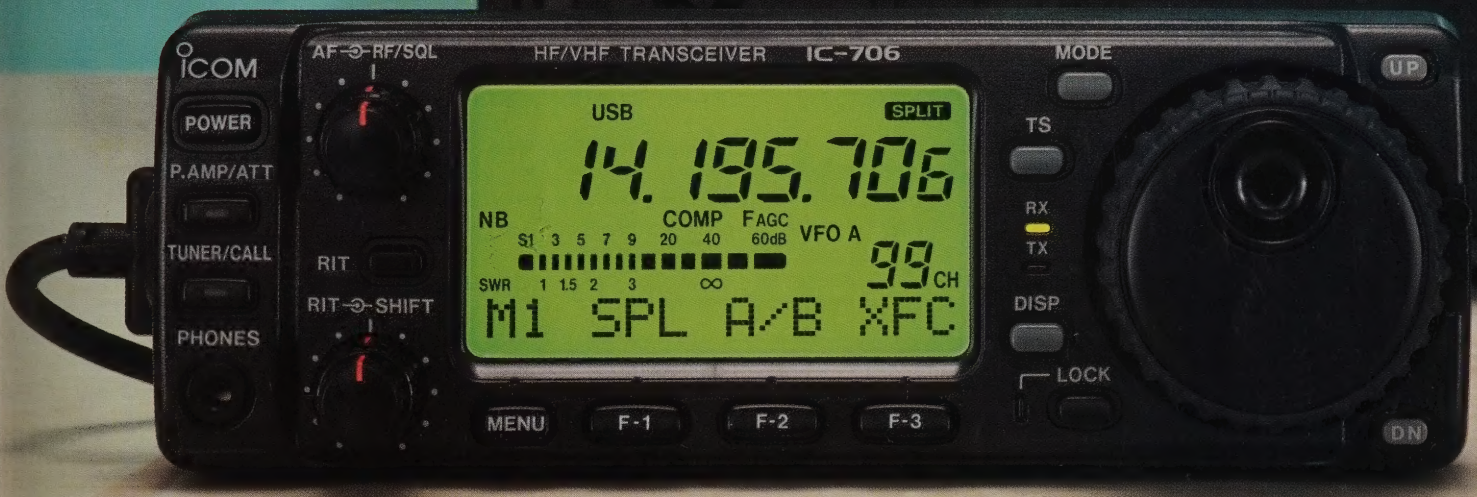

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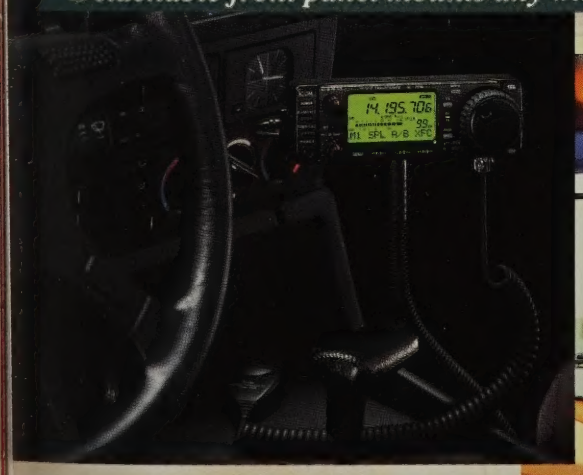

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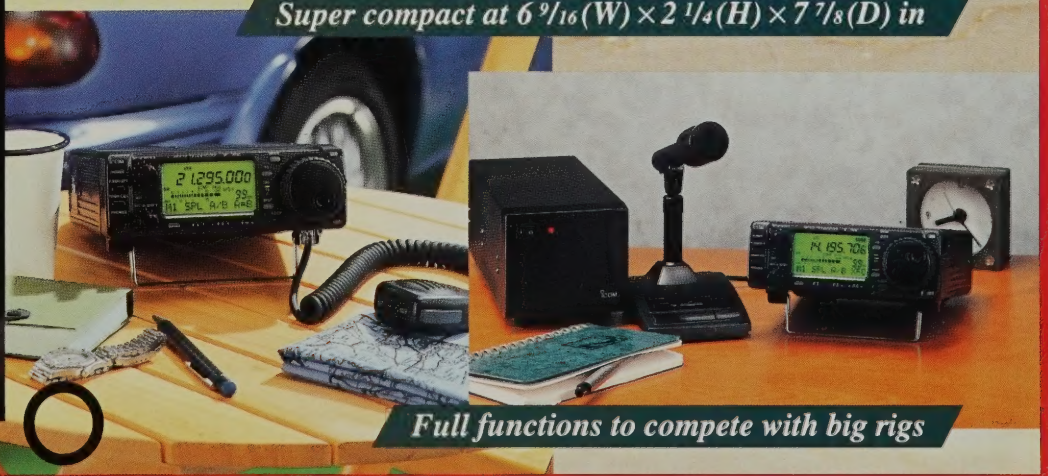

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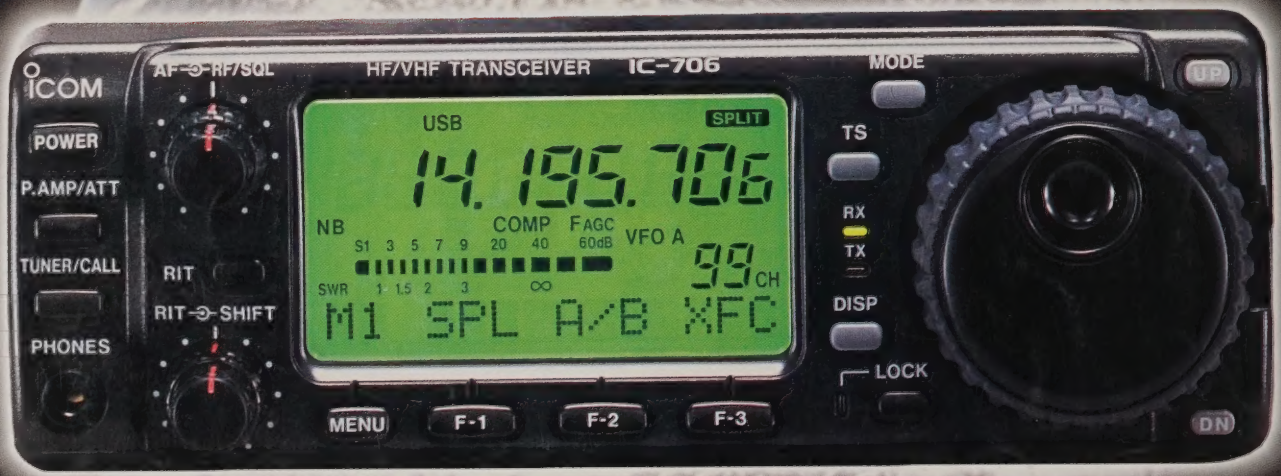

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